



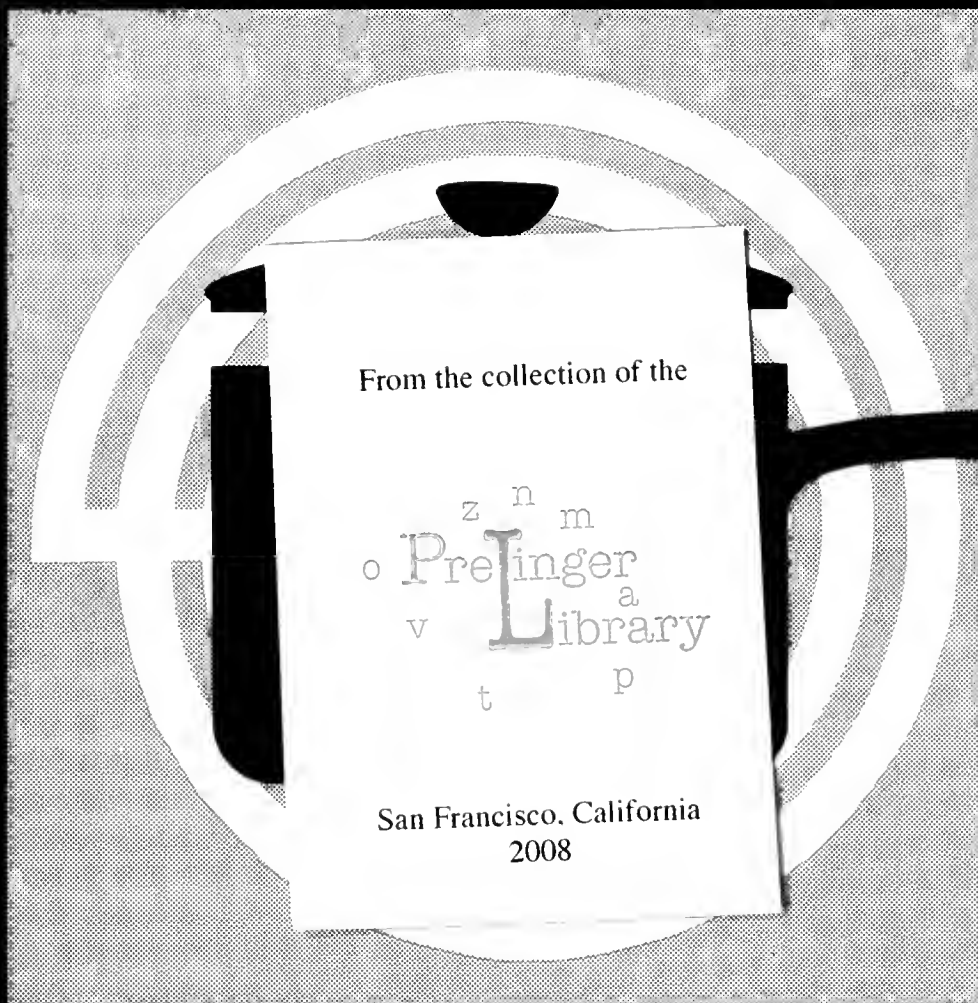
HOMEBOOK

of greater Seattle



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HOMEBOOK

of Greater Seattle

Smith Tower Seattle 4, Wash.
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Published annually for the enlightenment of Seattle homemakers; and in the interest of those who serve and sell with integrity and dignity.

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THE COVER PICTURE

An unusual fireplace, designed by Lawrence & Hazen, Architects, utilizes the unusual beauty of Glacial Green stone from Utah. The fireplace was an admired feature of the 1959 Seattle Home Show. The stone was furnished by Mutual Materials Co. who featured displays of some 20 varieties of stone, and 65 varieties of brick in their Seattle, Kenmore, Bellevue and Kent display rooms and warehouses. Mutual is a division of Builders Brick Co. of Seattle.

Residential Architectural Styles

Courtesy National Ass'n.
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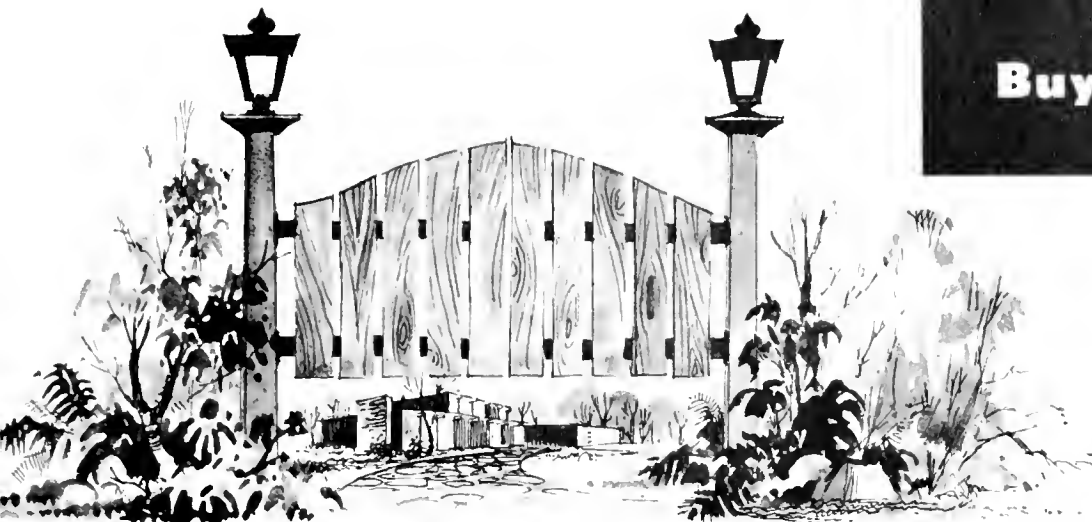


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HOW MUCH CAN WE AFFORD?

That moment you've been dreaming about has arrived. There's a new home waiting for you just over the horizon. Whether it is your first home or not, it is a momentous occasion. Your home is the very heart of your family existence: it is a "man's castle," a "woman's domain," and a "child's world."

It is probably the biggest single investment your family will ever make. With wise planning it can produce rich dividends, and a happy focal point of living. Therefore, let's first consider the basic elements of your decision:

1. How much you can afford to spend.
2. How to find the best possible buy—the one that suits the present and future needs of your family.
3. The responsibilities that home ownership brings, and be convinced that you are prepared to take this important step.

What Can You Afford?

The availability of money is extremely important. It determines how valuable a house you can buy, and controls when you can buy. There is no acceptable "rule of thumb" formula, although some individuals still cling to the outdated opinion that "2½ times the annual income" determines a family's buying power. There are so many factors involved that it is inaccurate and misleading to attempt a rule of thumb.

House buying power may be determined more accurately by figuring your prospective monthly housing expense as related to your *effective* (after deducting income tax) monthly income. This is the method employed by the Federal Housing Administration, which has prepared a report based on

thousands of case histories. It reveals, for instance, that the average American family which has an effective monthly income of \$400 expects to pay about 29% of income for housing expenses. With \$800 effective income about 21% of it would go to housing expenses.

To a great extent you will make your own decision as to how much you wish to spend for housing, but remember that the relationship of expense to income should be kept within those limits found to be favorable through experience in insured mortgage lending.

Lenders do not draw upon their experience in order to establish arbitrary limitations, but rather to assist you in making a safe, satisfying mortgage loan—through the consideration of all factors.

In arriving at a reasonable home ownership budget, use the analysis chart below. But, upon finding your

proposed budget within your means, don't forget to plan for down payment, closing costs and other expenses involved with moving.

Attention, Young Couples

The following remarks are aimed at young couples, but they apply to any family that does not own a home. Too often a family that could buy a home holds back, waiting for that dream home to come along, or waiting until the financial situation improves. In the meanwhile (and it could be a matter of years), money is paid monthly for rent. And there is nothing to show for it. Many enterprising couples in the lower income group find it quite within their means to buy a very inexpensive house for little or nothing down. Mortgage payments and maintenance costs combined are sometimes lower than what they would be paying in rent. Inside of several years their equity has built up to a point where it could represent the down payment for their dream home.

Thus, the lower-priced home becomes the stepping stone towards reaching a higher-priced home faster.

Analysis of Dissatisfaction

It has been determined that wherever dissatisfaction with home ownership exists there also exists one of the following factors:

1. House purchased was too expensive.
2. Poor construction or cheap materials.
3. Not enough investigation and foreknowledge on the part of the prospective home owner.
4. Dissatisfaction with neighborhood.

In conclusion we wish to point out emphatically that a few moments study of these pages on Home Ownership will equip you to avoid ALL of the above stated pitfalls.

HOUSING EXPENSE ANALYSIS

(Write in your proposed monthly expense)

Mortgage payments	\$.....
Real property taxes
Insurance
Electricity or gas
Heating
Water
Telephone
Maintenance & Repair
Total \$.....	

The total figure for monthly housing expense should not be lower than 20% (unfavorable) of your effective (after income taxes) income, in lower income groups. Medium income groups should aim for the mid-twenties, and upper income groups should aim for the high twenties as a minimum percentage.

By NATIONAL ASSOCIATION OF
REAL ESTATE BOARDS

10. *Satisfaction.* Along with the other advantages, there are many things that make life worthwhile—vegetables from your own garden... the chance for do-it-yourself projects, large or small... the backyard barbecue, etc.

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my opinion of house at _____
built by _____
price and terms _____

KITCHEN range ☐ built-in oven ☐ refrigerator ☐
dishwasher ☐ other (_____)

[illegible]

LAUNDRY washer ☐ dryer ☐ tubs ☐
 UTILITY SPACE furnace ☒ or boiler ☐ water heater ☒
 water softener ☐
 VENTILATING FANS kitchen ☐ laundry ☐
 bathrooms ☐ attic ☐
 other devices noted ()

INSULATION: CEILING 3" minimum (in blanket type)
or 4" to 6" if "blown wool" ☒
WALLS (wood) 2" blanket minimum, 3" better ☐
WALLS (masonry) ask how insulated ☐
FLOORS (concrete) 1" or 2" Perimeter insulation ☐
FLOORS (wood) 2" Perimeter around crawl space
walls or 2" blanket under floor ☐

VENTILATION: screened vents under eaves ☒ large
screened and louvered vents in gables ☒ other
vents in ridge or roof slopes ☐
SUN SHADING: east and west windows shaded by shade-
type screens ☐ overhangs ☐ plantings ☐
HEATING SYSTEM: size reduced by insulation for
economical heating ☐

AIR CONDITIONING: central system installed ☐ optional
-house insulated to prepare for air conditioning ☐

FULL HOUSEPOWER: 100 ampere 3-wire service entrance ☐ multiple circuits (how many _____) circuit breakers or fuses ☐ convenience outlets, switches where needed ☐

SOUND CONTROL: acoustical ceilings in kitchen ☐
laundry & utility space ☐ baths ☐ family room ☐
bedrooms ☐ living room ☐ dining room ☐
INDOOR-OUTDOOR LIVING: screened porch or patio ☐
sun and wind control with translucent paneling in patio
or porch ☐

attic space ☐ extra rooms or baths ☐
other possibilities (_____)

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YOUR CHOICE—NEW OR USED

By Archie Iverson, Builder, and John M. Morse, A.I.A.

After reaching a conclusion as to how much house you can afford, your next logical question is "Should we buy a used home or a new one?" To help you reach this decision we have outlined the considerations involved.

A. Buy a house already built:

1. NEW

a. "Tract" or "development" houses constructed in groups, preferably with community services of school, park, church and club building. These houses are standardized in a few design types, with variations, for the average family.

b. Custom houses constructed singly by a builder, for sale when completed. Design is more unique, more individual than in tract houses. Cost is usually greater because of better materials or more space.

2. USED

a. Good houses 5 years old or more may be found. They can be bought for less—and with more space for the money—because (1) they have depreciated since they were new, and (2) building costs were less in years past.

However, advice of an architect or builder should be sought before purchase to check soundness of construction and adaptability to remodeling.

B. Have a house built—especially for you:

1. On land of a real estate developer—in this case a community is in the making and the character of the neighborhood is yet to be seen.

2. On a lot you select in an existing neighborhood. Here the character and conveniences are already established.

There are many factors which affect your final decision as to which home you should buy. One of the factors that will help determine this answer is the neighborhood. You may find that your employment, or relatives, or friends have a bearing on the neighborhood you select. In selecting your neighborhood you should also consider facilities such as schools, transportation, churches and utilities. Check to see that they meet your needs both now and in the future. A good check list system is advisable. It will help draw your attention to such things as sewer facilities. If sewers are not available, is the septic tank and drainfield adequate and approved by the health department? Do zoning and subdivision requirements protect you from future de-valuation? Obviously, if you buy a home in a manufacturing or apartment zone,

that's probably the eventual type of district you will have.

Perhaps by now you are beginning to weigh the advantages and disadvantages of city or suburban living. Consider that suburban living often increases transportation time and costs. Further, road, sewer, sidewalk improvements, if not included in the subdivision you choose, could be quite costly. Better check and be sure. When you know the facts the right decision becomes easier to make.

Living close to a shopping center has its advantages. Will your family and you fit into the community life? Friendly neighbors, even those who might borrow a cup of sugar once in a while, are an invaluable asset to your life. You'll find they are the grandest people in the world if you are in need of help during sickness or any other unfortunate circumstance. You can easily introduce yourself to your prospective neighbors while house hunting.

Perhaps by now you have selected the neighborhood you like the best. Now ask yourself for an unbiased answer as to its potential in 5, 10 or 20 years. Is the neighborhood deteriorating? Some signs of decline are run-down houses, big houses cut up into small apartments or rented rooms,

high percentage of tenant occupancy, small business and industry moving in.

Perhaps the greatest aid in finding the best possible house is a thorough check list. House hunting is a serious matter, and finding the house that will best suit your family and will be a sensible investment is one of the most important ventures in your lifetime. We strongly urge you to take the necessary time beforehand to determine your needs and desires—be critical—and use a check list such as the one suggested here. A check list will assist you in knowing your needs, it will give you an accurate comparison of one house with another, and it will bring to mind many of the factors which are often overlooked. Remember, every feature of a house is of great importance at one time or another.

Finally, when the time comes for you to make the purchase you will be fully prepared to do so in an enlightened manner, and with an air of confidence.

The common law of business balance prohibits paying a little and getting a lot — it can't be done. If you deal with the lowest bidder, it is well to add something for the risk you run. And if you do that, you will have enough to pay for something better.

John Ruskin

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OLDER HOMES

Old houses are very much a part of Seattle's real estate scene. Because so many of them are downright bargains, with basically sound structure and excellent remodeling potential, they should not be overlooked. We're speaking of houses twenty or more years old.

If you're interested in getting a lot of house for the money, and can't quite afford to buy that "dream house" you've always had in mind, perhaps this secondhand house market has a special appeal to you. Let's look into it this way:

FOR

1. Shortage no longer exists. You get true value or better.
2. Easier to buy than before. Now FHA terms are equal with new houses.
3. Often more space: more and larger rooms.

4. Fully developed and established neighborhood.

5. Little or no assessments for neighborhood improvements.

6. Some old construction was basically sound, using good materials. Many years of wear left.

7. Depreciation (considered in the light of economic inflation) makes possible a bargain price.

8. Remodeling which actually results in property improvement does enhance the resale value. If you expect a return on this type of investment, you must be prepared to do much of the work yourself.

AGAINST

1. House may have hidden (or obvious) signs of structural failure and decay. But don't trust your eye. Call in an architect or builder for advice.

Their fee (it may be only \$15-25) is well worth it.

2. Spaciousness may not be useful. Rooms may not be well planned. Space may merely give you costlier upkeep and more steps.

3. Mechanical aspects, such as wiring, plumbing and heating may need updating. In some older homes the cost of such remodeling is prohibitive.

4. Neighborhood is often on the downgrade. Take careful look around.

5. Cost of upkeep is usually higher than a new home.

6. Money spent on repairs may help retain, but not increase value of the house. There are very few exceptions.

It is naught, it is naught, saith the buyer: but when he is gone his way, then he boasteth.

Proverbs 20:14



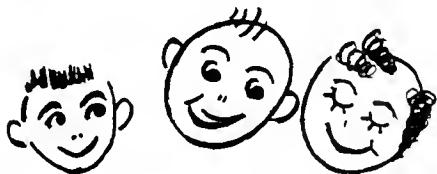
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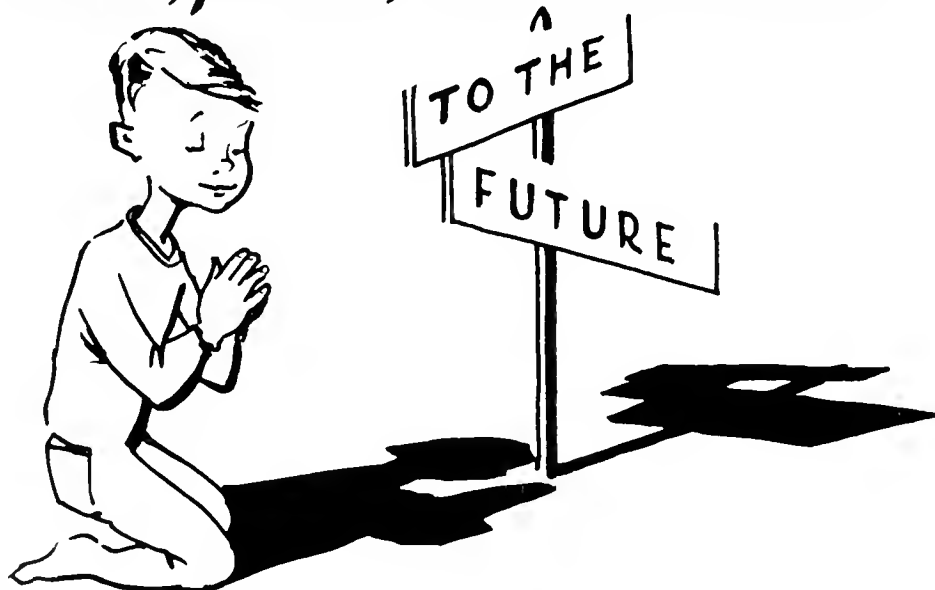
We have endeavored in this magazine to provide a two-fold service for you. First, to fill your desire to be well-informed we have drawn upon a large number of recognized authorities. In a concise readable manner they have answered the questions most commonly asked, while avoiding controversy, speculation and brand names. In this day of harried communication and frequent confusion our high aim is to enable you to act wisely in matters pertaining to your home.

Second, to provide you with a number of firms with whom you may deal confidently, we have strictly adhered to a policy of exclusiveness. Before accepting or soliciting advertising from any firm we have first investigated to determine the reliability, ethical standards and quality of service offered.

We trust that your experience with our advertisers will be satisfying, and that their products, services and attitudes will be consistent with their reputation.

THE EDITOR

"... and, please, our own home "



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**House Hunting
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DEALING WITH A REALTOR

By the SEATTLE REAL ESTATE BOARD

Ever go window shopping? Most people do, but the odds are that you seldom spot on display exactly what you're looking for—that dress of just the right size and color, that sofa to fit the special alcove, that fire engine to please Johnny.

If you're really serious about buying, you go into the store to inspect the complete line on sale. And that's where you find what you want—after comparison of prices, styles, sizes.

The same situation applies to house hunting. You can waste a lot of time and effort "window shopping"—driving haphazardly up and down streets seeking out "For Sale" signs, or even rushing out to see this house or that one which looks good in the newspaper ad.

The most satisfactory and efficient way to find the house of your dreams is to walk into the office of a realtor and tell him what you have in mind. Like most merchants, he has a complete line of products for sale—houses of all sizes, kinds, prices. These are called "listings." He will be glad to discuss these with you and then to show you the ones which seem to suit your needs and desires best.

Don't hesitate to walk into a real estate office. There's no mystery surrounding it. The broker is simply a merchant eager to serve you. His commission is paid by the seller or owner of the house, so you need not worry that his counsel and aid will cost you a fee.

Here are a few of the "do's" and "don'ts" to make your search a pleasant and rewarding one.

Don't bristle with indignation when your real estate broker tactfully asks, "How much can you pay?" The broker is not trying to pry needlessly into your personal affairs when he inquires about your finances, the number of children you have, and where the members of your family work. He must know certain facts to provide you

with the house which best suits your needs. Straight answers to his questions help him determine the right price, size and location of your home-to-be.

Don't be so dazzled by the glamour of the new house that you unthinkingly by-pass the existing home. Besides the "extras" which you can usually acquire with an existing house, you get a wider selection and can generally find greater bargains among older houses.

Owners of existing homes often need cash in a hurry or must move to another city in a short time and will sacrifice for a quick sale. Moreover, the competition of the millions of new houses built since World War II has shaved off the premium prices demanded for older houses at the height of the shortage.

Since buying a home generally will be the largest financial transaction in which you and your family will ever take part, select your real estate broker with the same care you would a

doctor or a lawyer. (Many real estate firms in Seattle are members of a multiple listing association, and are pledged to conduct their business in conformity with a strict code of ethics.)

Remember that a man's home is his castle—even when he's trying to sell it. There are times when it's convenient for him to show it, and there are other times when he'd rather lose the sale than have prospects trooping through. Thus, it's obvious why the realtor usually wants to make an appointment in advance.

Keep your appointments with the realtor and the owner. It doesn't do your cause any good if the realtor has to dream up weak excuses to give some owner who has tidied up his home and waited for several hours to have it shown.

Once an appointment is made, don't refuse to inspect the interior of a house just because the outside doesn't measure up exactly to some preconceived idea of your dream home. It

(Continued on next page)



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Dealing With A Realtor

(Continued from page 9)

isn't fair to the owner, and many a house hunter has discovered that "you can't always judge a book by its cover." Many of the "extras" which may make the home the best buy for you cannot be seen from the outside.

Don't feel that you have to regard your visit as a social call. You're there to inspect the house, not the people. Let common politeness be your guide. If it is soon apparent that the house doesn't meet your requirements, thank the owner and leave. Don't feel obligated to waste a lot of time looking into every corner, but don't insult the owner with unnecessary criticism about color schemes, size of rooms, and the like.

Don't bring your little children or pets on an inspection trip, if you can possibly avoid it. Other people may be more distracted than you by such comments as, "I wanna go home" and "Where's my lollipop?"

Don't register disinterest when a broker shows you a house and then go behind his back and try to make a deal directly with the owner. You put the owner on the spot, since he has a legal obligation to the broker when he lists his house for sale with him or through the broker's association.

Let the realtor do the negotiating. He is experienced in this type of transaction and knows the desires of both parties. It is to his interest to work out a mutually satisfactory agreement. Too often demands tactlessly expressed or unguarded comments may create an atmosphere of hostility between seller and purchaser, complicating or killing the whole deal.

Read all agreements before you sign them and make sure that all points are covered in writing. Many unpleasant wrangles can be avoided later if verbal promises or informal understandings are set out in writing. To make sure that everything is understood by both buyer and seller, it is wise to have itemized in the sales contract all non-realty items which are to be covered by the sale price. These include unattached, inside articles, such as refrigerators, washers, certain types of floor coverings, and window dressings.

By following these simple rules, based mostly on common sense and courtesy, you can make the purchase of your home one of the most satisfying experiences of life—with the advice and assistance of your chosen realtor.

It is better to dwell in the corner of the house top, than with a brawling woman and in a wide house.

Proverbs 25:24

Role and Function of the

SEATTLE REAL ESTATE BOARD

By RICHARD W. LENINGTON, *President*
Seattle Real Estate Board

Over a half century ago, the Seattle Real Estate Board was founded for three basic purposes: To serve the public, to elevate the real estate profession and to create a more favorable climate for real estate as an investment.

Its founding date of 1903, places the Seattle Real Estate Board as being one of the oldest real estate associations in the nation, antedating the formation of the National Association of Real Estate Boards by over five years. At the time of its foundation the real estate business in Seattle was one of brass bands, extravagant advertising and florid oratory, at a time when Seattle's hills were being sliced away, tide flats being filled and the largest buildings west of the Mississippi were about to be erected. Seattle was indeed "Boom Town of the West."

There were then, as there are now, serious responsible men in the real estate business; but their integrity was personal and there was little thought of real estate as a professional organization or as a business of principal and responsibility.

Typical of the pioneer real estate men in Seattle who founded the original organization was Fred West, the Board's first president. He was a strong organizer and a respected businessman. He was followed by individuals who, in a truly real sense of the word, were leaders in the formation of early Seattle. Among the first presidents of the Board were Ole Hanson, one time Seattle Mayor and R. C. Erskine, the only man to be three times president of the Board and who, incidentally, is still active as a member of the King County Planning Commission.

WHO IS A MEMBER?

Today a member of the Seattle Real Estate Board is not just any real estate broker. He is a person who is in the real estate business who is permitted to use the copyrighted term "Realtor" because of his membership in his local board, the Washington Association of Realtors and the National Association of Real Estate Boards. It is his obligation to operate under a strict code of professional ethics to protect the individual right of real estate ownership and to widen the opportunity to enjoy it. He must be honorable and honest in all his dealings and represent his client on the basis of knowledge and confidence. He must act fairly in his dealings with his clients, community and nation. Failure to observe this Code of Ethics places a member subject to expulsion. Since its creation almost six decades

ago the Seattle Real Estate Board has set the standards of the business from one of ballyhoo to dignified professionalism.

The Seattle Real Estate Board has always tried to counsel and aid the public and the home buyer in the solution of their housing needs.

The Board operates and maintains a constant educational program for its members to allow them to become more proficient at their profession. It conducts frequent courses, sales clinics, refreshers and sends out pertinent information regarding the changes in taxes and zoning laws and encourages the inter-relationship of various groups within the industry.

INCLUSIVE PROGRAM

The Board feels home ownership is a safe harbor against inflationary storms. Additionally, there are many other economic gains, tax savings and peace of mind. In trying to achieve this goal the Seattle Real Estate Board has been the strong voice in advocating fair and equitable taxes upon real property. To further this aim the Board has long been the advocate of the forty-mill tax limit. Saluted as one of its major accomplishments for the home owners in the State of Washington was the establishing of a constitutional limit on real property assessment.

The Board over the years has helped clear out fraudulent real estate schemes and was instrumental in ending the "advance fee racket" system of recent years.

Today its membership in the Seattle area comprises over 400 offices throughout King County composed of over 2,000 members. The Seattle Real Estate Board, like the Seattle Business Bureau, the Seattle Chamber of Commerce and other professional organizations, is a trade association which is designed by definition to protect the public. The Seattle Real Estate Board stands in a unique position in Seattle's business community. By being able to police its own, it assists the public and other law enforcement agencies in keeping real estate in its proper perspective. In the Greater Seattle area, where real property is one of our great assets, and without a doubt, one of the finest investments, the Seattle Real Estate Board looks forward to the "Soaring 60's" as being its greatest era. With the World War II "Baby Boom" coming into maturity and the development of our limitless natural resources, the Realtors of the Seattle Real Estate Board are geared to meet the challenge of providing competent, honest and indispensable service to the realty buying public.

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FINANCING A HOME

Conventional — F. H. A. — V. A.

So little is known by the average person about home financing that often hundreds, or perhaps thousands of dollars are needlessly spent. What the home-buying family does not usually realize is that there can be a big difference between the several financing avenues open to them, and that they can and should take the time to do some honest-to-goodness shopping.

It should be further noted that there can be significant differences in policy from one mortgage company to the next. The few hours you devote to getting the best possible deal may well be among your most profitable hours.

In lifting the cloak of mystery from this business of mortgages, let's first define the three types of mortgages available to you.

Conventional. As with other types of mortgage loans, conventional loans are available from banks, savings and loan associations, insurance companies, and mortgage companies. With this type of loan interest rates may be lowest (or highest) depending on the amount of down-payment and

terms. Substantial down-payment, usually ranging from 20% to 40%, is required. For security you offer only the mortgaged property itself and your own credit. About 60% of today's mortgages fall into this category, and most participants are in the low income (below \$3,000) or the high income (above \$10,000) brackets.

FHA. An FHA mortgage requires the same security as a conventional loan, and the Federal Housing Administration insures the lender against loss due to default. This insurance to the lender is actually paid for by you in the form of an added $\frac{1}{2}$ percent insurance premium on the unpaid balance of your loan. Thus, your total cost of an FHA loan is currently $6\frac{1}{4}\%$. Because of the added security to the lender you can usually get a larger loan with longer to repay.

As a borrower you have the protection of an FHA inspection at the time of construction, or appraisal of the property you plan to purchase. If the appraised value is far below the asking price of a house you may expect to pay a large down-payment,

or you may decide that the price was "out of line."

VA. Veterans of World War II or the Korean War are eligible for a mortgage loan in which the government guarantees repayment of up to \$7,500 of the loan. As the loan is paid off the amount of guarantee is reduced. The same benefits to the borrower are present as with FHA loans, with one notable difference. VA appraisers are primarily concerned with the best interests of the borrower—not the lender, and their appraisals produce an accurate market value of the house. A veteran may not be charged more than the VA-appraised value.

In recent years mortgage lenders have had little interest in the VA housing program for two good reasons: 1) Interest rates have been too low, and 2) There has been adequate demand for their money elsewhere.

COMPARE INTEREST RATES

Only with a VA mortgage is it possible to make a "no down-payment" purchase, but only if the VA guarantee of \$7,500 and your credit add up to sufficient security for the lender. But don't forget those closing costs. They must be paid in cash.

(Continued on next page)

	CONVENTIONAL LOAN	FHA LOAN	VA LOAN
How much can you borrow?	Maximum varies with conditions. Expect a limit of about \$25,000.	Up to \$22,500	No ceiling. Depends on lender.
What percent of house value can you borrow?	Usual maximums: Fed. savings and loan 80% State savings and loan 75% Insurance companies 75% Banks $66\frac{2}{3}\%$	For a house approved by FHA before built, or a house 1 or more years old use formula: 97% of \$13,500 plus 90% of next \$4,500, plus 70% of \$18,000 or over. For others use 90% of 1st \$18,000 and 70% over \$18,000.	100% loan possible depending on your credit and the strength of VA's maximum guarantee of \$7,500.
What will your interest rate be?	Currently $5\frac{1}{4}\%$ to $6\frac{1}{2}\%$. Varies with lender, market conditions, age and type of property, amount of down-payment, etc.	Currently $5\frac{1}{4}\%$ plus $\frac{1}{2}\%$ for FHA insurance. An additional $\frac{1}{2}\%$ service charge may be placed on loans under \$8,000.	Currently $5\frac{1}{4}\%$
Repay when?	Maximum varies between 15 and 30 years.	Up to 30 years to repay, or $\frac{3}{4}$ of remaining life of prop.	Up to 30 years, but no longer than expected life.
What is your minimum down-payment?	Usually 20% - 40%.	Minimum rule of 3% of first \$13,500 of acquisition cost (selling price plus closing costs minus prepayments for insurance and taxes), plus 10% of next \$4,500, plus 30% of \$18,000 or over.	May be nothing, or could follow a pattern similar to FHA.
Penalty for prepayment?	Most lenders impose some degree of penalty.	You may pay as much as 15% of the total loan in any one calendar year.	No penalty.
Open-end?	In some cases.	In some cases.	In some cases.

MORTGAGES

Amortized—Straight—Second

If you are buying a home a mortgage agreement of some kind is involved. All real estate loans require that the purchased property be pledged to the lender as security in the form of a mortgage until the loan is repaid with interest.

As a borrower you should thoroughly understand the terms of a mortgage agreement before you sign it. There are a number of provisions which may bear particular scrutiny. They are:

- Renewal fees.
- Legal fees.
- Penalty charges for late payment.
- Penalty charges for prepayment before maturity.

Provisions regarding financial responsibility and obligations of borrower in case of foreclosure at an amount lower than that of the loan.

Provisions regarding legal foreclosure in the event of your default making regular payments.

Provisions, often found in a supplementary agreement, requiring the borrower to keep the house in reasonable repair. Such an agreement serves the interest of both lender and borrower.

Mortgage loans may be classified in three ways:

1. Amortized Mortgages.
2. Straight or Fixed Mortgages.
3. Second Mortgages.

FINANCING . . . (Continued)

If you are buying under FHA or VA financing then you will pay a controlled rate of interest; an effective rate of $6\frac{1}{4}\%$ with FHA, or $5\frac{1}{4}\%$ with VA. However, if you are seeking a conventional loan you will find that shopping pays off. Interest rates vary greatly, usually from $5\frac{1}{2}\%$ – $6\frac{1}{2}\%$, and are affected by company policy, your credit, the condition of the money market, type and age of property, term of loan and size of down-payment.

It makes sense to shop for better interest rates. Take, for example, a 20-year \$10,000 mortgage. Getting the loan at $5\frac{1}{2}\%$ rather than 6% can save you \$700!

You may be in a position to wait until conditions for buying are more favorable. At a time when the money market is tight you may find it very difficult to get a loan. All requirements are tightened so that only the cream of the credit risks are accepted. Interest rates tend to get higher. If conditions are severe, FHA and VA loans may be virtually unobtainable.

On the other hand, when the market is loose you will probably have no trouble getting a loan. Interest rates, particularly those for a conventional loan, will be lower.

AMORTIZED MORTGAGES

Most recent home loans have been amortized mortgages. They provide that you make regular installment payments, usually monthly, to gradually reduce the amount of the loan. Payments are usually of the same amount each month, and they include a pro rata share of fixed charges such as taxes and insurance.

Interest rates vary according to the size of the loan, condition of the money market, amount of down-payment, length of term, etc. Such a loan may run for a period of five to thirty years—and soon the maximum may be thirty-five years.

Actually, there are two types of amortized mortgages:

a. *Direct Reduction*—In this type of loan monthly payments include both principal and interest. The principal payment applies to the unpaid balance of the loan until the loan is entirely paid. Usually the interest is calculated monthly on the remaining balance. Of course, during the first years of a long-term loan it would not be unusual for interest to amount to 65% or more of the monthly payment.

b. *Sinking Fund*—Some co-operative banks use a plan whereby the bor-

rower subscribes for a sufficient number of shares in the institution so that their matured value will be equal to the amount of his loan. Each month he pays in a fixed percentage of the matured value plus interest on his loan. Dividends are added to the payments until his shares reach their matured value, and then the shares are cancelled against the loan.

STRAIGHT OR FIXED MORTGAGES

Growing more and more rare are the straight or fixed type of mortgages which provide that the entire principal becomes due at maturity. The loan is set up on a fixed basis of five years or more, and can be renewed at the discretion of the lender. Interest payments may be set up on a scheduled basis, but there is rarely a specific plan for amortization by regular payments.

SECOND MORTGAGES

Mortgages on property where a first or prior mortgage already exists are called second mortgages. Because of the prior lien which adds to the lender's risk, FHA and VA loans prohibit a second mortgage. Interest rates are considerably higher than on a first mortgage. In addition, a fee is usually charged for placing and renewing such a loan. Because of the liberal terms offered with today's mortgage plans, a second mortgage is seldom necessary.

Another type of mortgage, the "Open-end" mortgage, is discussed later in our section on Remodeling.

Plan In Advance For

CLOSING COSTS

"Just when we thought we had enough money socked away to close the deal . . . Wham! Another \$500!" Don't let that happen to you. There's more to buying a house than just meeting the down payment requirements. Don't forget the closing costs.

What are closing costs? These are the charges which you must pay at the time of settlement for the insurance, services and other incidental expenses incurred when you buy a house. They vary in accordance with the value of the house you buy, and a host of other factors. A fairly accurate "rule-of-thumb" for determining closing costs is to figure 3 to $3\frac{1}{2}\%$ of the total cost. Below, we list several "typical" closing cost figures for houses in various price ranges:

Value	Closing Costs
\$10,000	\$350
15,000	500
20,000	700
25,000	800
30,000	900

Now let's take a look at the items which could appear on your closing cost statement.

Title insurance. The title policy which the buyer pays for is the "Mortgagee Policy," which insures the mortgage company against loss arising from possible disputes over your ownership. (A separate policy called the "Purchaser's Policy," affording protection for the buyer, is paid for by the seller.) For this protection you pay a one-time premium, based on the amount of insurance written. A typical charge is \$30 to \$35 on an average priced home.

Mortgage Service Fee. Mortgage firms use different names for this one. It is the charge they make for setting up the loan, and includes such expenses as inspections, attorney's services, preparation of papers, notary fees, commissions and other items of overhead. It is usually a flat fee of 1% of the sum you borrow.

Extended Coverage. This may also be called "Comprehensive Coverage" or just plain "Fire Insurance." Such coverage is required by the lender to protect his loan if the property is dam-

(Continued on next page)

TITLE INSURANCE

Your Protection Against Loss and Related Legal

Generally there are two classes of property—Real and Personal.

Personal Property—on the one hand, is property that is movable, is not fixed—often perishable in character—produced today and consumed tomorrow—new and usable today—worn out, discarded and junked at the end of its economic life.

In most cases, actual possession of this property is sufficient evidence of ownership. For example—if you buy a suit of clothes, take delivery—get your receipt for payment and wear the suit—nobody disputes your right to wear it.

When it is worn out, or thin in the breeches, you probably turn it over to the Goodwill, or some other worthy agency and nobody disputes their ownership or possession of your discarded suit. Eventually—it is completely gone and nobody thinks any more about it.

On the other hand—**Real Property** is the land and that which becomes

part of the land by becoming attached to it.

Real Property is fixed, permanent by nature—enduring for countless human spans.

When you buy a lot, on which to build your dream home—or when you buy a home already built—you secure a deed of conveyance from the seller, conveying the title of the property to you.

And the deed that you receive from the seller, and the deed back of it, that the seller secured when he purchased, and the court decree back of that, the deeds back of that and so on to the original source of ownership

—make up your ownership—and is the means whereby you have a right to the just possession of your property.

Each distinct transaction down to your deed, is a fact susceptible or proof, by means of deeds and transfers, and the whole series of distinct but related transactions make up what is known in the title industry as a "Chain of Title."

Because land is permanent and enduring, the life span of man uncertain, and his memory not always dependable or exact, a means of preserving the historical facts and proof of land ownership was devised known as the recording system.

Simply, it provides for the recording in a public office of documents affecting real property, that by law give notice to persons dealing with real property of matters affecting it. These documents in a public office are open to public scrutiny and inspection and a specific document can be located in that office by means of what is known as a Name Index. Most modern public recording offices today use a photostatic system by which an exact picture copy of the instrument recorded is preserved for the public record.

It is from these public records that the first compilation of proof of title was made as to a particular or specific tract of land.

ABSTRACT OF TITLE

This was known as an Abstract of Title, and was actually what the name implies. It was merely a summary or digest of those facts of record, produced by a person skilled in sorting the voluminous records of the county in which the land was situated and plucking forth the pertinent title facts affecting that particular piece of real estate.

Once produced, it had to be examined by a lawyer, to determine by legal construction of the facts set out in the abstract, the status of the title and whether or not the title was good or, as is legally considered, merchantable.

This system, however, had several principal weaknesses.

First, in the process of examination of the abstract it was necessary to determine whether the title documents complied with the necessary legal standards. Whether they did or did not remained one man's opinion, no matter how well reasoned.

The next examination by another lawyer might, and often did, result in

CLOSING COSTS

(Continued from page 13)

aged by fire or other specific hazards.

At the time of closing you prepay the insurance premium for one year. If you decide to pay your insurance along with your monthly mortgage payments, as most families do, you will be required to pay the premium for 13 months. This additional month's premium is then held in escrow, and each month a small amount is added to it until it is sufficient to pay a year's insurance in advance when the policy is renewed.

Insurance rates vary, of course, but if you are planning to buy an average-priced house, then plan to spend about \$75 to \$100 for hazard insurance.

Escrow Fee. Because buying a home involves the preparation of legal documents, it is necessary that such papers be handled either by a firm which specializes in that field or by the escrow officer of your mortgage company. This fee is based on the value of your purchase, and usually ranges between \$40 and \$60.

Property Survey. A land survey is often required in order to establish the conformity of your lot with your deed. If your house is new, two surveys may be required. Survey charges inside the city limits are usually \$30 to \$35. Outside the city they are usually higher.

FHA Insurance. If your loan is FHA insured you must pay one half of 1% insurance in addition to the interest. In this manner the FHA builds its own insurance fund which makes

such long term low interest loans possible.

Credit Report. When you borrow money a credit report is necessary—and you have to pay for it. It will cost about \$5, and may vary from \$3.50 to \$7.00.

Prepaid Interest. From the moment you sign for your loan interest begins to apply. The amount you prepay is for the fraction of a month that you are using the loan before the first regular monthly payment becomes due.

Prepaid Taxes. Real Estate tax must be paid in advance for the current year. Amount of the tax is approximately 1% of the sale price. To determine the amount of your prepayment divide your tax by 12 then multiply by the number of months remaining in the year, including the current month.

Appraisal Fee. To satisfy the requirements of the lender, an appraisal of your proposed property must be made. The cost is passed on to you. It runs approximately \$20 for FHA loans and \$25 or more for GI loans.

Recording and Filing Fees. When your purchase is completed your mortgage must be recorded with the county, and your deed must be filed. Expect a fee of \$7 to \$10.

Other incidental expenses may appear on your closing statement, but we've covered the usual items. Knowing what these expenses usually are will aid you not only in planning ahead for your house buying adventure, but you will also be able to "shop" the mortgage companies better.

a completely different opinion, and probably with as good reason.

Thus, a purchaser of real property was often confronted with the hazards of having to rely upon opinion of his counsel, which, however good, might

wife during marriage is presumed to be the community property of both spouses. It cannot be sold, transferred or voluntarily encumbered without the signatures of both spouses. It is true, of course, that property may be sepa-

As pointed out, title evidence is prepared from the public record!

There are certain things not disclosed by that record which you, as a purchaser, are legally responsible for—such as

The law presumes you to be a reasonably cautious person, and as such, should be put on inquiry by what you see, what you are told or could reasonably inquire about.

Title insurance does not guarantee matters determinable by a survey of the property, or

Whether or not the improvements are entirely within the confines of the lot lines or that your neighbor's fence is not encroaching on your property.

Neither does title insurance cover an existing violation of a plat or private restriction.

DETERMINE ZONING

Inasmuch as zoning affects the use of real property and not the title to it, your title policy will except this, as well as building code requirements. You should by all means determine to what use the property you buy is zoned and that the intended use conforms, whether it be first residence, second residence, commercial, heavy industry, or what have you!

While on the same subject, I think it is important to point out to new home planners when selecting a lot to ascertain the availability of water and sewer lines and the cost of connecting to them.

If no sewer facilities are available, then will the lot, using a septic tank, meet the necessary percolation tests and other sanitary requirements?

These will not show on your title evidence!

* * *

Title reports and title insurance are designed to give the purchaser the opinions and the conclusions of a highly trained and experienced staff of title experts as to the record condition of title to a specifically and legally described parcel of real estate.

No panacea has yet been devised, and more than likely never will be, that will afford 100 per cent protection to the careless or unwitting purchaser against the unscrupulous and designing person.

By being informed, by seeking (and following), qualified and competent advice on legal or other matters on which you are doubtful or uncertain,

By having proper title evidence can you avoid the pitfalls and make the purchase or the building of a home one of the most pleasant and gratifying experiences of your life.

Aspects of Home Ownership

By CARL SCHEUCH

require the costly process of defending in court.

As the country grew, and real estate transfers became more numerous and title questions more complex, there developed, quite naturally, a need for an absolute standard to measure title facts.

Title insurance was the next step in the evolutionary process.

It was an opinion and a conclusion, produced speedily and accurately, combining the services of the abstractor and the examiner, plus the added feature of insuring its client against loss by reason of a defect in either.

Title Insurance Defined

Simply stated, title insurance is a contract, whereby the insurer, for a consideration, agrees to indemnify the insured, in a specific amount, against loss through defects of title to, or liens and incumbrances upon realty, in which the insured has an interest, as purchaser or otherwise.

Title insurance is not new. It has been written in the State of Washington since 1911.

The insuring companies are under State regulation, and are subject to the provisions and restrictions of the insurance code, adopted by our state legislature as a regulatory measure for all types of insurance companies doing business in the State of Washington.

Under this code, they are examined and inspected by state auditors who verify their financial soundness and their cash or security deposits required to be deposited with the state treasurer as a guarantee to its policyholders of payment of claims of loss. The rates on insurance are also scheduled and approved by the insurance department.

COST EXPLAINED

The cost of title insurance is a fixed charge, based on the amount of insurance written and covers both the examination involved and the insurance feature; one premium is charged, there are no renewals.

In any discussion of home ownership and title insurance, I think that it is important that one should understand the basic laws of the state regarding real property.

The State of Washington is a community property state and as such all property acquired by husband and

rate in character, where it is acquired by gift, inheritance, or devise of where it is acquired before marriage. The basic rule is that real property takes its status as of date of acquisition.

These are legal aspects which affect title to real property and are one of many which are considered in the preparation of title insurance opinions.

You should know what title insurance covers, and what it does not cover.

Title opinions are based on information carried in the office of title insurers and on its records by a system that makes the required data readily available to its people, such information emanating from some 18 or 19 public offices, which includes Federal and State sources, all of which affect the title to real property.

A title insurance policy insures you and gives you the added protection against matters which the bare record might not have disclosed.

For example: a forged deed, which would not effect a valid transfer, the insanity or other incapacity of a seller which might render a transaction subject to challenge, among many other things.

READ REPORT CAREFULLY

When you are purchasing property, you should read your preliminary report on the title or your title policy carefully (and it is surprising the number of people who don't) to ascertain that your sale agreement has been performed by the seller.

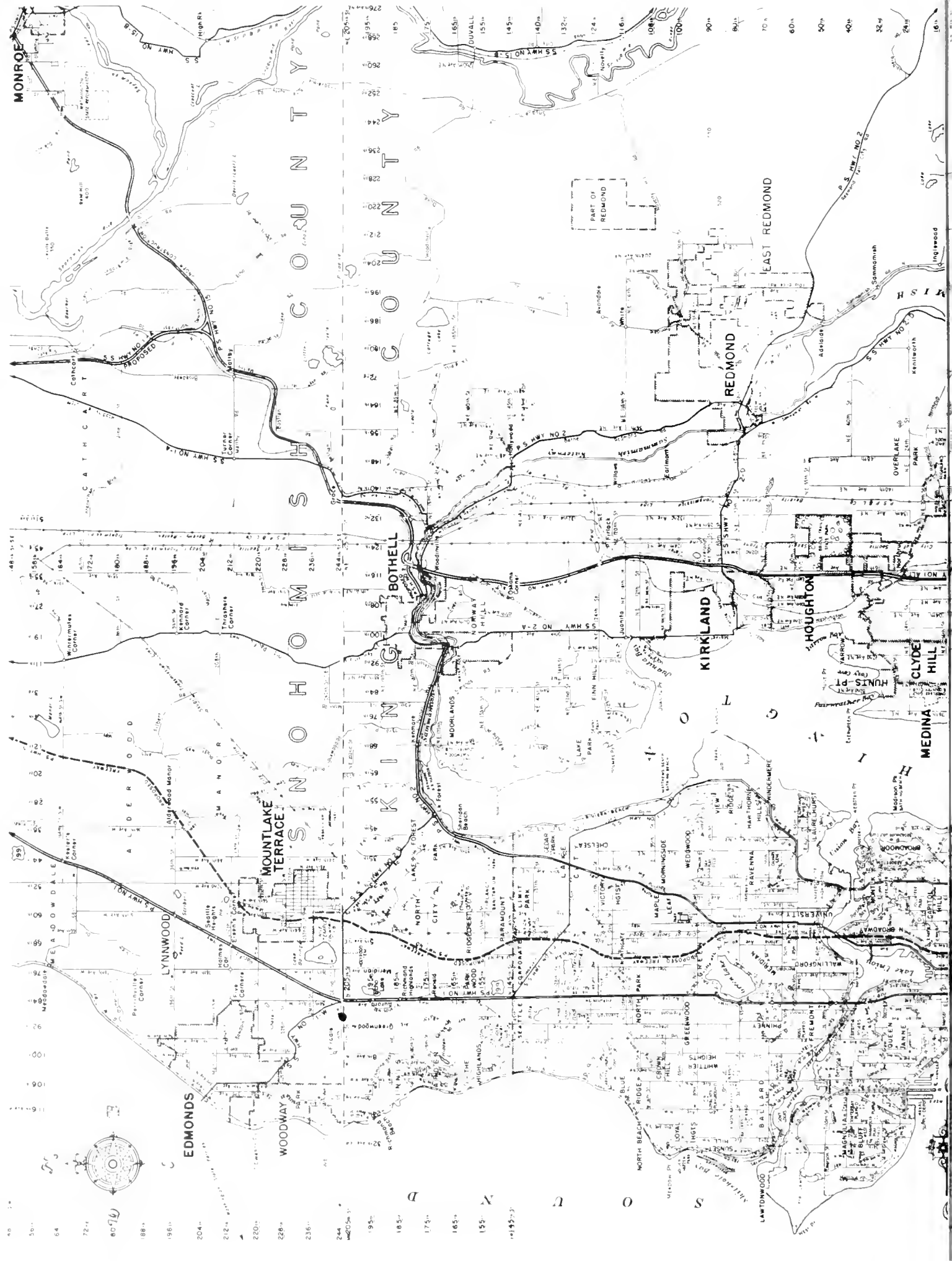
If there are building restrictions, be sure that they do not preclude you from putting the property to the use for which you are purchasing it or that a recorded easement does not adversely affect this use.

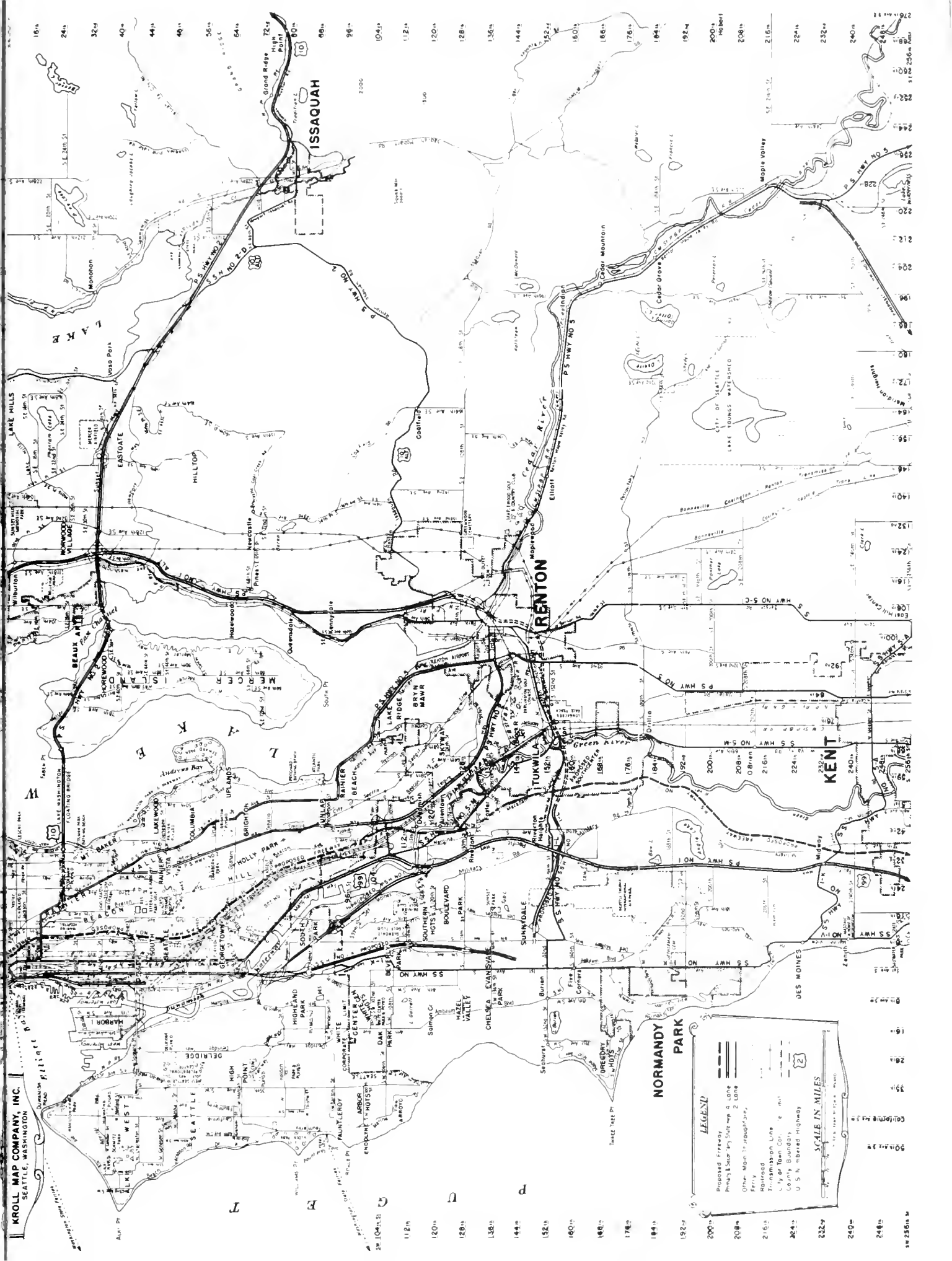
Read and study these exceptions with care so that you understand them and their consequence on your title and use of your property.

They are all set out on your title for a reason.

As a word of caution, you should be sure that the particular property you bargained for has legal access to a public street or road, this is especially important if you are building or buying under F.H.A. or G.I. financing.

Now, what about matters not covered by title insurance—





KROLL MAP COMPANY, INC.
SEATTLE, WASHINGTON

LEGEND

- Proposed Freeway
- Primary Road
- Secondary Road
- Other Main Thoroughfare
- Other Road
- Transmission Line
- County Boundary
- U.S. Highway

SCALE IN MILES

0 1 2 3 4 5

90° 15' W
47° 30' N

WHY THE CO-OP APARTMENT?

By Jim Groves

There are many advantages that may be cited for co-operative apartments. But two stand out in the present upsurge — taxes and inflation. A co-operative apartment is a building owned by a co-operative corporation in which each resident controls his own apartment through the purchase of shares of stock in the corporation and a proprietary lease to his apartment. The cost is determined by the size and desirability of the apartment chosen. The building is operated on a non-profit basis by a board of directors selected by the stockholders. Through this board, the residents at all times make the final decisions regarding the services they desire.

Two factors are immediately apparent. First, a definite price is established at the outset for each apartment and the resident's monthly payments are based on this price until the apartment is completely paid for. This means he has a definite protection against inflation and rent raises which might occur in the case of a privately owned apartment building.

Secondly, in buying his apartment, just as in buying a home, he is paying on a mortgage, a large part of which is applied to interest. Interest charges are deductible for income tax purposes

whereas rent payments are not. The tenant of a rented apartment, is, of course, paying a rental sufficient to cover the landlord's interest cost on his mortgage but he can't get credit for it tax-wise. For some taxpayers this savings can be substantial.

Another advantage is that a co-operative apartment should be able to operate at a lower monthly cost to the resident because no profits have to be made for a landlord. A variable amount is the monthly charge which must go to maintenance and special services such as gardening, elevator, janitorial, receptionist, etc.

Equity Acquired

Just as in buying a home, the resident gradually acquires an equity in his apartment that constitutes an asset to him. It is included in his estate in case of death. He can sell it or even sublease his apartment for extended periods of time in case he wishes to travel or leave the city for any reason.

Co-operative apartments seem to have their greatest appeal for people who enjoy the relatively effortless living of apartment life. All maintenance and physical problems are taken care of as well as protection of his dwelling in his absence.

Generally speaking, group living,

such as in an apartment, results in lower costs per resident for such things as maintenance and insurance than in a private home. Safety factors are greater because of fire-proof construction and constant attendance by caretakers and janitors.

The primary disadvantage compared to an ordinary rental apartment is the down payment required to acquire the stock and lease. This varies, but can be substantial, amounting to as much or more than a down payment required for a private home.

Older People Attracted

In actual practice, co-operative apartments seem to be attracting older people whose families have grown up and who no longer wish to undergo the management and care of a large home. Their homes are usually pretty well paid for, so they sell them, invest the proceeds, holding out enough to make the initial payment on a co-operative apartment. Many young people, however, also are attracted to the co-ops where they can enjoy relatively care-free living until their families begin to grow. Then they convert their apartment equities into a private home for the child-raising period.

In the house of the righteous is much treasure.

Proverbs 15:6a

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HOW TO SELL YOUR HOME

By Q. ROBERT DAVIS

Selling a home confronts the home owner with a number of questions. What price shall he ask for his property? Does he require a cash sale, or may he sell on terms? Should he list his property for sale with a broker or shall he attempt to sell the home himself? What costs are involved in making a sale? What instruments are required, and what are his responsibilities on them after they are executed by him? Should the sale be closed in escrow? These are a few of the problems with which he may joust before his sale is completed.

Fixing a price at which a house will sell and yet will return to the seller what he thinks the place is worth is probably one of the most vexing problems which the owners will encounter. It is true that homes have increased materially in price in past 10 to 15 years, but the average buyer is still quite cautious about paying more than a property appears to be worth.

SEEK COMPARATIVE SALES

A prospective seller may seek out comparative sales in his area or community at the city auditor's office, if he knows the parties who were involved. He should consult one or more real estate brokers in his area for estimated sales prices. If the property will qualify, he should have an up-to-date F.H.A. (Federal Housing Administration) appraisal of his property made. This appraisal will expedite a sale if the prospective purchaser insists on F.H.A. insured financing, but such appraisal is not binding on the owner. The appraisal is made to establish the loan value — not the market value — of the house.

If the home owner is willing to sell on a small down payment, with the balance on contract over a period of time, frequently the seller may obtain a higher price for his property. Not

infrequently such contracts have a provision in them which requires that the purchaser must apply for a mortgage loan when he has sufficient equity in the property to qualify for financing, and from the proceeds of such loan the seller is to be cashed out.

The great majority of home sales in the Seattle area are made through the services of real estate brokers. The average home owner is not familiar with methods of advertising his home, nor does he have the facilities or salesmen to procure prospective purchasers. He is not familiar with the instruments which are ordinarily necessary in making and closing a sale, nor the details in pro-rationing of costs. As a result, most sellers choose to list their property with a real estate broker.

UNDERSTAND THE AGREEMENT

In making such a listing the home owner should thoroughly understand the listing agreement which must be signed. If it is an "exclusive" listing, it gives only the particular broker the right to sell the property, except that when the broker is a member of a multiple listing group, he is pledged to share the listing with other members. Such listings should have definite terminal date or period set so that should the broker not sell the property within the fixed period of time, the owner will be free to sell the property himself, or to list the property with another broker or group of brokers. If an exclusive listing is given to a member of a "multiple listing" group or association, any broker who is a member of that association may show or sell the property with your consent. If the property owner has given an exclusive listing, he cannot sell directly to a prospect after the listing agreement has expired, if the prospect was procured

by the listing broker, without the possibility of being required to pay commission. He should thoroughly read and understand his listing agreement, or have it explained to him.

COSTS INVOLVED

A great number of sellers are greatly surprised at the expense involved in selling a home. The costs may run as high as eight to ten per cent of the sales price. The principal items of costs are the following:

1. State Real Estate Excise Sales Tax—1% of total value of the property being sold.
2. State and Federal Revenue Stamp—\$1.05 for each \$500 of value, on value of equity being transferred (affixed to deeds only).
3. Title Insurance—premium fixed by value of property being sold.
4. Real Estate Broker's commission—6% value of property being sold.

In addition, if the sale is closed in escrow, normally, the escrow fee is divided equally between buyer and seller. The fee is based on the value of the property being transferred, and ordinarily starts at a total charge of \$40 to \$50 for the most inexpensive properties.

In addition, if the purchaser procures a FHA or Veterans Administration loan, the seller may be required to take a discount of 2% or more. Under Federal regulations this discount may not be charged to the buyer, but in order to attract lenders the discount is necessary. Sellers in most instances are willing to allow the discount in order to make a cash sale.

Other charges may be recording fees, attorney's fees, expenses involved in clearing title, etc.

There are several instruments which commonly appear in real estate sales.

(Continued on page 21)

CONSIDER A TRADE-IN

By Harry H. Olson

Often the purchase of a home can be expedited, in the absence of cash consideration, by either an outright trade for a home or by trading in for the down payment. Some of the items turned in for down payment on homes in our office over the past twelve years have been: other home equities, cabins, contracts on the sale of other properties, either real estate or personal; lots and acreage, automobiles, trucks, boats, houseboats, cruisers, corporate stocks, store inventories, estate portions, mortgages, prepaid services to be done at a later time, furniture, or an encumbrance on furnishings, and accounts receivable. The list of items that can be traded need only be limited by the limitations of the requirements of the parties involved, together with the abilities and the willingness of the Realtor involved to take the necessary efforts to accomplish the desired purposes. The party wishing to make the trade-in should expect to compensate commission-wise for the extra effort required to dispose of the trade-in, in the place of cash. If the party desirous of making the trade-in, has very specific and limiting requirements for his purchase, he may run into considerable trouble in achieving his objective, unless the Realtor is in position to offer from his own inventory other trade-in items or cash that would be more acceptable to the Seller.

GUARANTEED TRADE-IN VALUE

Your Realtor may be able to assist you in the purchase of a home by writing up your offer on the home you want prior to the sale of your home by underwriting your down payment through a guarantee price on your former home. This is much more desirable than the contingent deal. My meaning may be clearer by giving an illustration on a recent transaction in which we operated this method. A

client found a home for \$32,500 through our office and it was possible to purchase it for \$4,000 down. The client had \$1,000 cash; and a home that would FHA appraise for \$10,000 to \$10,500 depending on the reconditioning the client might do in getting it ready for sale. Client owed \$5400 on the small home. We agreed to advance \$3,000 on the equity at time for closing on the larger home. At time of sale, costs for sale, mortgage discounts, sales tax, revenue stamps, title insurance, etc., would come out of the difference. Should the sale end up with net proceeds of less than \$3,000, the loss would be ours.

Incidentally, the smaller home was sold, and the seller was very pleased with the guaranteed trade-in which enabled the consummation of the purchase of a particular home before it was sold to someone else.

FHA MORTGAGE ASSISTANCE ON HOME TRADES

The following, through item 4, is copied from a letter from the office of the Commissioner of the Federal Housing Administration dated February 11, 1960.

"To assist in trade-in financing and certain other types of home mortgage transactions, and to avoid duplicate closing costs, FHA will, under the conditions set forth in this letter, insure a mortgage on a one- or two-family residence executed by a non-occupant mortgagor in the same amount as that available to an owner occupant for the following types of transactions.

1. *Operative Builder's Escrow Commitment:*
Builder's firm commitment covering new construction.
2. *Two-party Transaction:*
The trade-in of an existing house for another house.
3. *Three-party Transaction:*
A transaction which involves a home owner who desires to sell his present house and purchase

another one, the seller of the second house and a third party, such as a real estate firm or broker which will purchase the first house from the home owner. In this transaction, the home owner will dispose of the original house by selling to the third party, using the proceeds of the sale to purchase another house from the seller. The third party becomes the proposed mortgagor under the FHA escrow commitment. The third party must file the usual application and, in addition, must furnish a copy of a contract to purchase the property at some time in the future. The mortgagor must also state that the person from whom he purchased the house intended to use the sale proceeds to purchase another home.

4. A Refinancing Transaction (including mortgaging unencumbered property):

To be eligible for an escrow commitment in a refinancing transaction, the mortgagor must furnish a statement indicating his intent to use the proceeds of the transaction toward the purchase of another house for his own occupancy."

Under the above procedures it is required that 15% of the maximum mortgage be withheld in escrow by the mortgage company until the occupant purchaser has been accepted by the FHA to replace the temporary borrower. If this has not occurred by the time for the 18th monthly amortization payment then the escrowed amount will be used as a mandatory reduction of the mortgage indebtedness. It will be noted that this permits adequate time for sale even on a market much slower than the Seattle market has ever been in recent years.

For exact details as to this type of exchange you should consult your Realtor or Mortgage Banker. You have traded automobiles and appliances for years, why not try to work out your next home transaction in this manner, if it is advantageous for you?

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HOW TO SELL

(Continued from page 19)

The first of these is the earnest money agreement and receipt. It should contain the names and signatures of the buyer and seller, together with their respective wives. To be binding, the agreement should contain the legal description of the property to be sold. A street address is not sufficient. The description should be taken from the deed or contract under which the seller claims contract. If only a portion of the seller's property is to be sold, the description should be checked by an attorney, or the broker. If it is questionable, it should be referred to a title company.

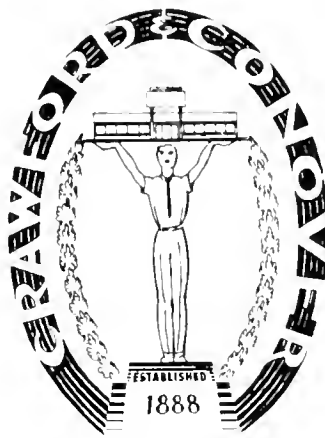
All the terms of the agreement of sale must be clearly set out in the earnest money agreement, for once it has been signed and accepted by both buyer and seller, it cannot be changed except with the consent of both parties. A definite time limit should be set for closing the sale, or the seller may be forced to wait indefinitely while the buyer shops for the most advantageous financing.

At the time of closing, the seller will ordinarily be required to give a warranty deed conveying the property, if the sale is for cash. By statute, the maker of the warranty deed warrants or guarantees that he is the owner of the property and has the right to convey, that the property is free from encumbrances (unless specifically excepted) and warrants quiet and peaceable possession and that he, the grantor or maker of the deed, will defend the title against all persons who may lawfully claim an interest in the property.

If the sale is to be by contract, then all details of the contract must be clearly set forth. The contract incorporates all of the terms set forth in earnest money agreement, plus provisions for payment of taxes, insurance, conditions against waste or neglect of the property, and the method by which the contract may be cancelled for default.

If a home is to be sold on terms, a contract is preferable from the seller's standpoint rather than giving a deed and taking a mortgage back. This is for the reason that a contract may be cancelled for default and possession regained ordinarily in 60 to 90 days, whereas mortgage foreclosure may require between 16 to 18 months before possession of the property may be regained.

Selling property is a rather complicated matter. The seller should thoroughly understand what he is undertaking at the outset, and he should seek competent advice particularly before he enters any binding contracts, or executes deeds. The few dollars he spends on attorney's fees at the time he enters the sale, may save him hundreds of dollars trying to correct errors made during the course of the sale.



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WHY A DISCOUNT?

Selling a home has become a more costly procedure in recent years because the seller nearly always must pay a discount. Simply defined, a discount is an adjustment of the interest which enables the lender to receive an interest rate equal to what the money market yields elsewhere.

Both old and new homes are involved, but as a rule, the newer homes require a lower discount, and older homes a higher discount. Other factors affecting the rate of discount are the location, price range, amount of down

payment, source of money, and most important, the condition of the money market.

Because of the many factors involved, there is no rule of thumb to enable you to determine in advance the rate of discount you must pay. We can only give you a rough guide which reflects market conditions at the time of publishing of this book. The usual spread (lowest to highest rate) in each loan category is as follows:

Conventional Loans — par to 2%

F H A Insured Loans — par to 9%

G I Loans — 1t to 15%

SUGGESTIONS FOR A QUICKER SALE

Before Showing

1. Keep lawn trimmed, flower beds cultivated, and yard free of refuse. Does your house look inviting?
2. Redecorate if necessary. A coat of paint or a new counter top will often produce a quicker and higher priced sale.
3. Clean windows and remove spots from walls.
4. Plumbing should be in best working order.
5. Repair small imperfections such as loose door knobs sticking drawers and warped cabinet doors.
6. Storage and utility areas should be free of unnecessary accumulation. They look small if crowded.
7. Keep stairways free of litter.
8. Keep closets neat and clothes properly hung.
9. The kitchen — usually most important — should be sparkling at all times.
10. The bathroom, too, should be bright and clean.

11. Arrange bedrooms to look as large and bright as possible.
12. Keep house well lighted.

While Showing

13. Avoid having too many people in the house during inspections.
14. Turn off radio, television and other distractions.
15. Keep pets out of the way — or out of the house.
16. Don't kill the sale by too much talk. Don't oversell.
17. Don't apologize for the appearance of your home.
18. When your home is being shown by a realtor, don't walk along with them unless invited.
19. Don't try to dispose of furniture and other possessions to the prospect before he has made the purchase. It may lose the sale.
20. If selling through a realtor, he prefers that you do not discuss price, terms, possession or other factors with the customers.

DEALING DIRECTLY WITH A BUILDER

Many families which want a custom built home deal directly with the building contractor, rather than through an Architect. This is advisable only under the following circumstances:

1. When you are familiar with the contractor's reputation, skill, and style, or if you are reasonably sure that he will provide a satisfactory service for you.

(Editor's note: Our advertisers fulfill this qualification.)

2. When you are in possession of a complete set of plans, or when you know such plans are available through the builder. They should be adaptable to your lot, your budget and your desires.

The contractor you choose should be bonded. Thereby, you are protected from any chance of liens or incomplete construction. A contractor will be granted a bond only when he has sufficient cash reserve to build not only your home, but others which are under construction by him.

When discussing your plans be as specific as possible in the preliminary stages. Once you have agreed to the plans you will find it difficult and

costly to make changes. You may think it a minor matter to raise the fireplace just one foot. But the added labor and materials are certainly not free of charge. Once you approve a set of plans any changes should be made in writing and signed by both parties before construction continues.

Be particularly specific when discussing your utility installations. If you want colored plumbing fixtures you must say so. Otherwise, you will most likely get white fixtures. If a particular style or brand appeals to you include it with the plans.

Your heating system, too, must meet with your specifications. Not only type and brand name, but heating capacity, location and size of duct work or panels are important. Make sure you are getting what you want, then stick to your decision.

Above all, remember that you are making one of the most important investments of your lifetime. If comfort, convenience and livability are important to you then you must be prepared to pay more than you would for a tract house. "Bargain hunting" will be a fruitless pursuit.

It has often been said by builders and realtors alike, as they examine a previously built home, "If only the builder would have put another \$500 into this home!" That figure is often the difference between good construction and not-so-good construction.

Consider, for instance, the necessity of an adequate heating system. A "minimum standard" system may ultimately prove to be less efficient, more expensive to maintain and inadequate in case of future expansion of your home.

Consider the importance of high quality lumber, roofing and siding materials, windows, paint, appliances, flooring and floor coverings, plumbing and hardware. Weigh the advantages of ample wiring and adequate storage.

It is costly to alter or add to the original construction. Therefore, it is wise to employ the materials and workmanship which will provide for the ultimate in serviceability, convenience and comfort.

The house of the righteous shall stand.

Proverbs 12:7b

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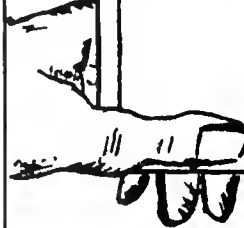
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HOW TO SELECT AN ARCHITECT

The Washington State Chapter
The American Institute of Architects, Inc.

An architect should be chosen solely on the basis of his competence and integrity. Selection on the basis of a competition in professional charges is contrary to a mandatory rule of professional conduct. An architect seeking to secure employment on such basis should therefore be suspect as to his integrity and professional standing.

The following methods of procedure for the selection of an architect are customary:

Direct Selection. Selection by the owner through personal knowledge on the basis of reputation, demonstrated ability, and the recommendations of others for whom the architect has rendered service.

Comparative Selection. Selection from a group of architects given opportunity to present evidence of their qualifications, the owner acting with or without the advice of an architect serving as a professional advisor.

Design Competition Selection. Selection according to the Architectural Competition Code Procedure of The American Institute of Architects.

AID TO PLANNING

Custom building involves extensive planning to achieve maximum satisfaction. Every major phase of your new home — appliances, wiring, plumbing, heating, furniture, window coverings, floor coverings and painting — are all covered in other sections of this book.

A careful study of these pages will be of great assistance to you.

PLANNING WITH THE ARCHITECT

That magical moment has arrived. You're going to build a house! You have always hoped that some day your family could live in a house you had planned for yourselves—combining all the best points of houses you have been in or read about. This house of yours—so you dreamed—would have comfort, convenience, room for all kinds of real living, places for everything, and above all an atmosphere that said it was *yours*.

Chances are you've waited a number of years for this moment. You've kept your eyes and ears open for ideas and innovations which should be incorporated into your dream home. You have either a drawer full or a head full of ideas. Now is the time to put them into action.

Before you take that first step, consider what a sizeable investment you are about to make, and how much it means to you and your family. This may help to renew your desire to get the job done right. You want to avoid disappointments. You don't want to spend any more money than is necessary. And you want to suit the needs of the entire family.

Your first step is to choose an architect. (Read "How To Select An Architect") He will assist you in all subsequent stages of the building progress. You should have complete confidence in him, and further, you should have a thorough understanding of all plans and sketches prior to their execution.

Get off to a sound start by offering a frank statement of your financial limitations. If the cost of the project is controlled by a fixed limit, this should be stated clearly in writing.

It is ideal if your architect can help you pick your building site, but most likely you have bought a lot prior to calling in the architect. If you have an opportunity, get some carefully chosen trees planted.

Get to know that lot of yours because the architect will expect you to furnish the following information: a complete and accurate survey of the building site, giving the grades and lines of streets, pavements, and adjoining properties; the rights, restrictions, easements, boundaries and contours of the building site; and full information as to sewer, water, gas and electrical service and other utilities. You will also be expected to pay for borings or test pits and for chemical, mechanical or other tests when required.

Perhaps you are wondering how much "extra" the architect is going to cost you. If custom design, convenience, and satisfaction mean very much to you, then it is safe to say that you will actually save money. Many a family has regretted the day they bought a set of stock plans and turned them over to a builder. Bypassing the architect is simply too great a risk.

Compensation to the architect would

(Continued on next page)

Planning with the Architect (Continued)

be governed by one of the following systems.

1. Percentage of Construction Cost.

For all structures of a residential character, such as homes, swimming pools, garden accessories, etc., a fee of 10% of the cost of the work is recommended by the Washington State Chapter of the A.I.A. For alterations and remodeling the recommended fee is 10% to 15%.

2. Fee Plus Costs.

Under this system the fee is determined by the intensity of the service required and the length of time and the responsibility involved. To this are added the direct charges for all work involved, plus a small percentage to cover overhead. The architect will be paid monthly a stated portion of his fee and reimbursement of direct costs and overhead incurred during the previous month.

3. Other systems.

a. Previously agreed lump sum.

b. Per diem or hourly rate.

c. Architect's technical payroll cost multiplied by a factor to cover overhead and professional fee.

Here's the payment schedule which the architect will expect you to adhere to:

1. 25% of the basic rate upon completion of preliminary studies. It is proper, upon signing an agreement, for the architect to receive a portion of this amount as a retainer.

2. An additional 50% upon completion of the working drawings. If work is extended over a period of months, then monthly payments should be made.

3. At monthly or other stated intervals and in proportion to work performed payments should be made until work is completed, at which time the architect's fee should be completely paid.

4. Payments other than those on the basic fee fall due as the work is done or as costs are incurred.

5. No deductions should be made from the fee due to penalty, liquidated damages or other sums withheld from payments to contractors.

After you have selected your architect and have completed the financial arrangements you will have a few informal talks during which you may express your requirements and desires in a house. Be open and frank in answering any questions he may have, and give him a complete picture of your mental dream home. He will make an inspection of your lot, or help you make the selection.

Schematic drawings are then prepared showing the architect's recommended solutions. Several of these may be necessary before an agreement is reached. There will follow preliminary drawings of the approved

plan, and outline specifications of materials to be used. At this point preliminary estimates of cost are possible.

Your architect then prepares the final working drawings which show in detail all work to be done and materials to be used. Then after preparation of forms of proposal and contract documents, bids are extended to a list of selected contractors. Bids are received and discussed by you and the architect, who will recommend awarding the contract to the lowest responsible bidder. Bids may vary as much as 15 to 20%.

Following the award of contract additional large scale and full size detail drawings are prepared. Your architect may then set aside his drawing board. By this time several weeks or even months have passed.

During all phases of construction it is the architect's duty to supervise the general construction as well as subcontract work, at all times representing your interests. He may also be

Key to satisfaction:

CAREFUL PLANNING

By R. Robinson, N. S. I. D.

Planning a home is a privilege many of us enjoy at least once in our life span. It, therefore, behooves us to give serious thought to our way of life and the material and spiritual things that give us pleasure.

Too many of us these days allow ourselves to be SOLD a structure or idea accompanied with the usual definitions of the trade: "terrific," "panoramic," and, of course, the most baffling and misrepresentative phrase of them all "It's the Trend." So what!! They aren't going to live in it, YOU are. Trends will change with the seasons. Make sure that your plans are based on something more satisfying and lasting.

Now let us consider some of the more practical aspects of the problem.

The interpretation of a plan or blueprint is quite a difficult job for the average layman. During the past fifteen years of interior planning I have found the common weakness to be the inability of people to visualize what happens to space when four straight lines are transformed into four straight walls. When this happens they find that the walls prove to be much closer and taller than they anticipated. The unfortunate result is that the furniture you planned (in your mind) just won't fit or is out of proportion to the area.

To help prevent this dilemma, remember that most plans are drawn to a scale $\frac{1}{4}"$ to $1'0"$ or for every quarter inch on the plan it means $12"$ on the

your best source of legal and financial advice.

(Editor's note: Many building contractors refuse or resist supervision by an architect. This does not necessarily indicate incompetency. If you and your architect are satisfied with the qualifications of your builder, then prior to the outset of any work make sure that a clear understanding is reached regarding responsibility and supervision.)

Upon completion of the work you have the house you wanted, with every detail satisfied. You have the most house for the money, and your resale value is higher.

Your rewards are unlimited when you get the job done right.

It's unwise to pay too much, but it's worse to pay too little. When you pay too much you lose money... that is all. When you pay too little, you sometimes lose everything, because the thing you bought was incapable of doing the thing it was bought to do.

John Ruskin

finished floor. It is wise to cut out small pieces of stiff paper to correspond in scale to all your pieces of furniture; number them, and after shifting them around on your plan to the desired location, transfer them, or glue them, to your Master sketch. This will prevent the constantly recurring problem of a bedroom with a wall of closets, a wall of window, a door in, a door to the adjoining bathroom and no place to put the bed — unless it's circular and in the middle of the room.

Careful measuring is always economically sound. For example, most carpeting comes in 9', 12' and 15' widths. If your room width is 12'6" you are apt to be stuck with a 15' width and waste a good portion of it.

Check all heat register locations in relation to where you plan to put your buffet, rugs, sofa, etc. You'll find invariably that's exactly where they'll be blocked and inefficient.

Most builders will include a ceiling fixture in the center of the dining area, so that a light will be directly over the table. However, very often, by the time you put a buffet against one wall it moves the table location off-center, and you end up with a candelabra in your hair.

These few tips will show you how important it is to lay out your furniture in each room and plan accordingly.

Don't be gullible. Know what you want and be firm. It's a big investment. It's your life!!

BUILDING PERMITS REQUIRED

Permits are required for all new building, alterations, remodeling, repairs and other types of home improvements. This requirement protects you in many ways.

As a home owner you may obtain your own permit only upon demonstration of your ability to do the work properly. Staff members at any of the city departments listed below may be consulted as the need arises.

Type of Permit	Where Obtained	By Whom
Boiler	Building Dept.	Owner or Contractor
Building or Grading	Building Dept.	Owner or Agent
Driveway Crossing	Engineering Dept.	Owner or Contractor
Electrical	Building Dept.	Electrical Contractor
Furnace	Building Dept.	Owner or Contractor
House Moving	Building and Engineering Depts.	Contractor
Oil Burner & Oil Tank	Building Dept.	Owner or Contractor
Piping (Water, Steam or Gas)	Health Dept.	Contractor
Plumbing	Health Dept.	Contractor
Side Sewer	Engineering Dept.	Owner or Contractor
Street Use including Tree Planting	Board of Public Works	Owner
Water Meter & Service	Water Dept.	Owner or Contractor

CHECK YOUR PROPERTY RESTRICTIONS

If you are planning to build, or to buy land or a building within the City of Seattle, you may save yourself later trouble and money by checking your rights and the restrictions affecting the property. The following questions are designed as a guide only, and assume that you have clear title to your property:

Have you checked use permitted of property, per cent of lot coverage allowed, required yards, etc. — Building Department or Planning Commission.

Have you checked the zoning of both your and the surrounding properties and how such zoning may affect present and future improvements? — Building Department or Planning Commission.

Does your property have legal access to a public street; is it a legal building site as to size and required frontage on a dedicated street? — Building Department or Planning Commission.

Do you know the exact boundaries of your property and are they clearly defined? — Engineering Department & Land Surveyors.

Are there water and sewer liens which do not appear on record in your title? — Water Department.

Has your front street been graded to its permanent grade? If not, what will the future grade be and how will it affect access to your property and its value? — Engineering Department.

Do you know that all electrical wiring must be done by a Licensed Electrical Contractor under Electrical Permit? — Building Department.

Do you know the *exact* location of the margin of your front street? This margin may not necessarily be the margin of the improved portion of the

street. — Engineering Department.

Do you know the character of the soil on your property? Is it in a known slide area? — Engineering Department.

Is there a sewer available? — Engineering Department.

If not, can you install a septic tank? — Engineering and Health Department.

Is there a watermain available? Where is it located? — Water Department.

Is your building on a lot high enough apartments.

Do you know that fees are charged for side sewers and water service permits? — Engineering and Water Dept. to enable sewer service for all floors, including basement? — Engineering Department.

Has your property been assessed for a sanitary sewer, so that you may connect your premises without further extension of the main sewer? Has the side sewer been constructed to the curb or property line? — Engineering Department.

Do you know you must get permits for any use made of the public street, such as driveways, encroachments, retaining walls, planting of trees and shrubbery, in the planting strip? — Engineering Department.

If buying a building, have you made sure that the building, wiring, furnace, plumbing, etc., have been inspected and approved? — Building and Health Departments.

Do you know that the owner is responsible for all work done, even when done by a licensed contractor? — Building Department.

If property includes rental units, have they been legally established? — Building Department.

PLAN FOR STORAGE

Let's look into the requirements for an average family.

OUTDOOR CLOTHES. Hats, coats, over-shoes, boots and other rainy weather garments should be kept in a closet near the front entrance. Plan enough space for visitors, too.

CLOTHES. Plan for each person a minimum of 2 feet deep and 3 feet wide. For a man the clothes hanging rod should be 5 feet from the floor; for a woman, 5 feet 6 inches. Children's closets should have rods and hooks at convenient heights.

SEASONAL CLOTHES. A separate moth-proof closet is advisable. Hanging rod should be 5 feet 6 inches from the floor. Shelves should be provided for blankets and similar bulky pieces.

LINEN. Best location for the linen closet is near to bedrooms and bathroom. Provide at least 18 inches of depth, with varying height of shelves. Four shelves should be the minimum.

SPORTS ACCESSORIES. Fishing gear, howling balls, rackets, skis, hunting gear, etc. should be kept in a clean, dry place, and easily accessible.

CLEANING EQUIPMENT. Vacuum cleaner, mop, broom, dustpan, floor polisher and often the ironing board need to be kept in a convenient place, preferably in or near the kitchen. Minimum dimensions should be 2 feet 6 inches deep by 4 feet wide.

STORM WINDOWS AND SCREENS. Allow for storage in an inconspicuous place, preferably on racks. Their moving should not interfere with other storage.

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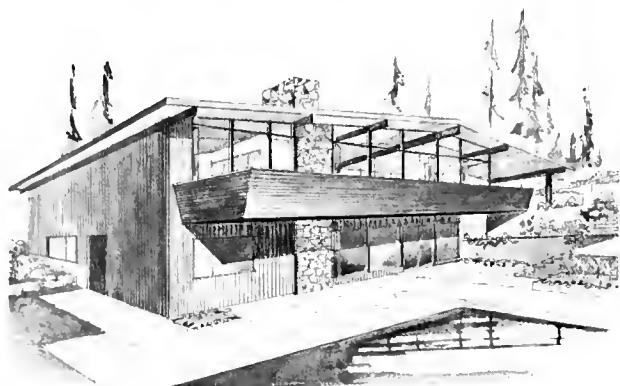
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HOW TO SELECT A BUILDER

By JOE MARTINEAU
Managing Director
Home Builders Association
of Greater Seattle

Most residential building contractors are individuals proud of their chosen profession, proud of the homes they build, and proud of their reputations for integrity, ethical practices, stability, experience and quality construction.

Unfortunately, the traditional "bad apple" occasionally rears his head. For this reason it is important that the prospective customer adopt a simple but assured rule-of-thumb in choosing his residential building contractor.

The following outline should serve as a basic standard for the customer's determination in the choice of a competent building contractor.

A. The customer should know what he wants:

1. A custom-built, individually designed and styled home;
2. A choice of a ready-built home from a broad selection available in varied price ranges, designs and styles; or,
3. The alternative program of remodeling and/or enlarging a present home.

B. Types of Contractors:

1. Custom Home Builders;
2. Speculative Home Builders;
3. Remodeling and Home Improvement Contractors.

Many building contractors specialize in only one of the above classifications, while as many others diversify and provide effective service in more than one category.

C. Importance of a Qualified Contractor:

1. Experienced, proved construction ability;
2. Integrity;
3. Financial stability;
4. Managerial experience;
5. Technical background and constant adjustment to "new dimensions" in housing.

D. What You May Expect of a Contractor:

1. High standards of integrity and ethical practices;
2. Wide experience in construction industry, particularly in the field he is pursuing;
3. Adherence to plans and specifications—all changes and modifications only upon mutual approval of purchaser or his agent;
4. Application of new methods, standards and materials with the purpose of producing the best housing possible at the most realistic cost possible.

Once the customer knows what he wants he should select the type of

building contractor required and measure him by these standards of integrity, experience and competitive value.

A custom home may be constructed effectively by competitive bids solicited from three or more custom home builders (lump sum contract); by a materials and labor plus overhead and profit contract (cost plus); or, by a negotiated contract wherein the customer and building contractor determine by negotiation, as the name implies, specific terms of the construction contract.

A speculative home is usually purchased following the customer's choice resulting from one or a number of basic requirements as to space, utility and design; location and community facilities; and, quality, price range and financing terms.

Remodeling, of course, results from the desire of a homeowner to upgrade quality, utility and design of his existing home, or to enlarge his present residence to meet the changes that occur in family needs during the economic life of a home.

The type of building contractor sought for any of the above classifications is readily identified by the choice of construction determined to be desired or necessary by the customer.

After the choice is established it is relatively simple for the customer to qualify his choice of building contractor or contractors by the simple rules of integrity, experience and quality previously noted, and now more extensively outlined.

Integrity is in a sense another word for reputation, and this may be determined by the customer through queries to his financial institution, credit agency, Home Builders Association, and previous customers of the building contractor.

Experience also is readily determined by the number of years the builder has been active in the profession, by reputation, as noted previously and by evaluation on the part of the customer of completed building construction accomplished by the building contractor.

Competitive value within a standard of quality (specifications) the customer desires means, in the case of the custom built home or remodeling project, a strict compliance with the published requirements of the customer by the building contractor. If a customer is to expect a fair bid from a building contractor the customer himself must be fair. A building contractor's time is both valuable and important to him. It should not be wasted by shoppers with incom-

plete plans; uncertain specifications as to type, quality, or specific use of materials; or by customers seeking competitive prices from a grouping of contractors who do not fall into equal levels of performance relative to reputation, experience, or quality of workmanship and materials supplied.

The measure of competitive value and quality in speculative housing can be determined by the customer as he personally evaluates homes offered to him for purchase, and by the further reliance upon his findings as they relate to the reputation and experience record of his chosen home builder or builders.

For the home remodeling prospect this special note: Measure your desire and/or need for remodeling or expansion against the economic value of the improvement as related to cost; seek competitive bids from reputable contractors; beware of fantastic offers, gimmicks, give aways and unfounded claims; and finally, remember, "Rome wasn't built in a day." Beware of the fast hard sell!



Quality

Custom Homes

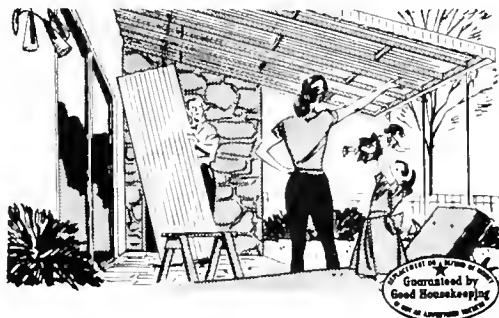


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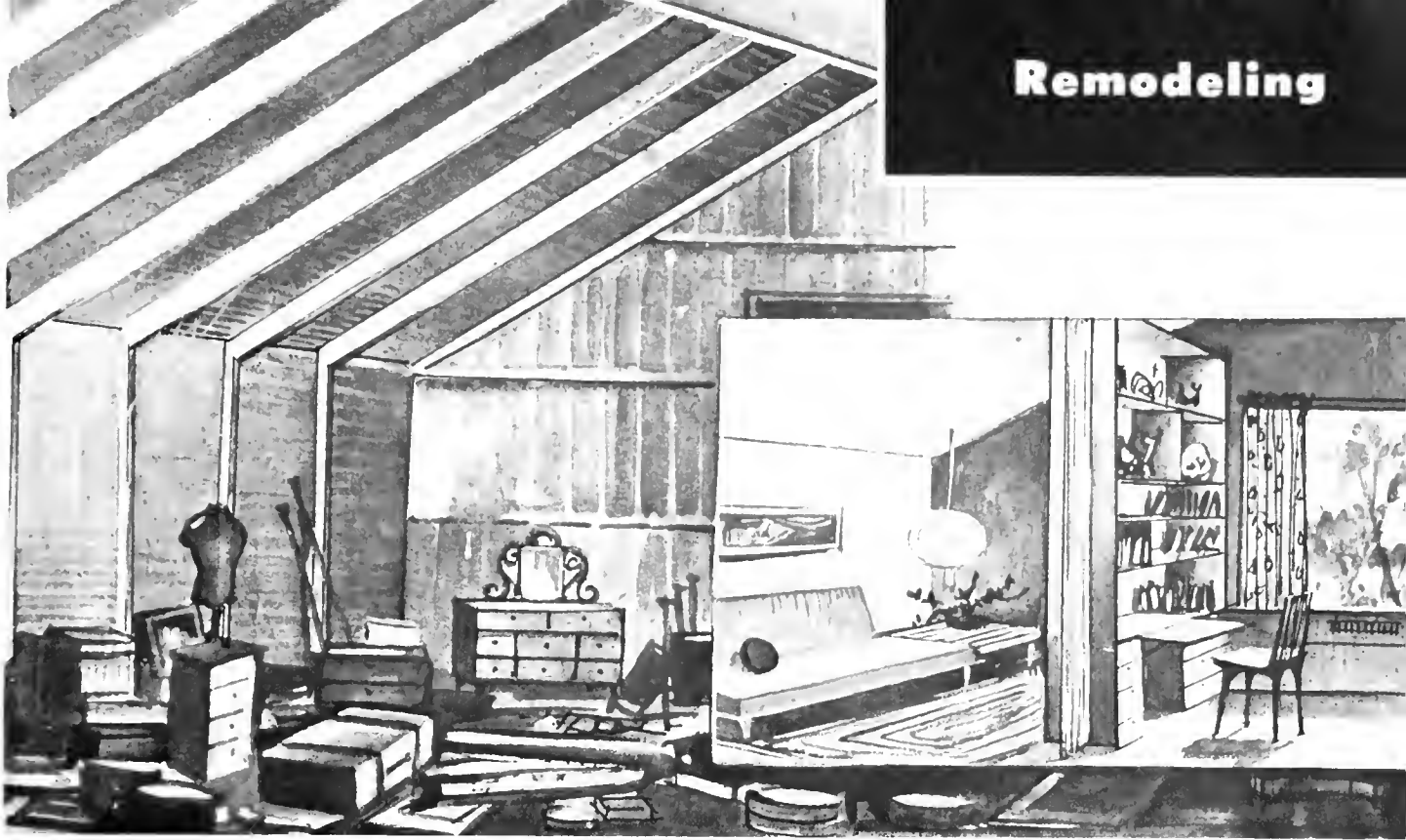
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HOW TO FINANCE YOUR HOME REMODELING

It doesn't do much good to dream about that remodeled kitchen, that badly needed bedroom or that new roof without having some means of putting that dream into action. In other words, where does the money come from? The truth of it is, if more families knew that money for such improvements was so readily available there would be more smiles per capita.

There are seven main sources of money available to you, but it is necessary to examine each closely to determine which source might best suit your circumstances. Here are the seven types of loans:

1. FHA-insured loans.
2. Open-end mortgages.
3. "Own plan" loans.
4. Refinancing.
5. Second mortgages.
6. Small personal loan.
7. Installment plan.

Now let's take a closer look at each type of loan.

FHA LOANS

Most home improvement loans are FHA-insured, or "Title I" loans. This does not mean that FHA lends the money directly, and it does not give you any guarantee of quality or workmanship.

These loans are made by banks, savings and loan associations, finance companies and other lending institutions that have contracts of insurance with the FHA covering this type of loan. The FHA insures the lending institutions against loss, thereby making it easier for you to obtain credit. If

you default, FHA will cover 90% of your creditor's loss. Then you may expect a caller from FHA.

On the surface a Title I loan appears to be an ordinary installment loan. With few exceptions, you need no endorser, collateral or security. You

may borrow up to \$3500 and take five years to repay.

The lending institution may not charge more than a 5% discount. This means that if you borrow \$500 for one

(Continued on next page)

AVOID THE RACKETEERS

Perennially one of the largest areas of customer complaints, according to the Seattle Better Business Bureau, is the field of home improvements. Disgruntled homeowners report being victimized by sharp, fast-talking, high-pressure salesmen representing a contracting firm. Invariably the homeowner is pressured into repairs or improvements (often unnecessary) which prove later to be inadequate, with poor materials, sloppy workmanship and far overpriced.

These salesmen are referred to in the trade as "suede-shoe operators." The fact that their victims are often intelligent, enlightened people attests to their unerring high-pressured skill.

Here's another way to look at it. Even if everything stated by a door-to-door salesman is true, and even if his company's work is excellent the final price must include a commission for the salesman. Thus, you will pay more than is necessary.

There are a few things to remember if you wish to avoid the racketeers.

1. If you are in doubt about the reliability of a firm, check with the Better Business Bureau, the Home

Builders' Association of Greater Seattle, another trade association, or even your lender.

2. Don't believe exaggerated claims about materials, services or guarantees.

3. Don't believe that any material or workmanship is guaranteed by FHA. The government neither endorses nor inspects workmanship. You, alone, are the judge.

4. Be very wary of propositions to use your home as a demonstrator, with you receiving a bonus or cash rebate from jobs resulting from yours. Such agreements are impossible to control, and, at best, are of little or no value to the homeowner.

5. Don't fall for "trial purchase" offers. Once the money leaves your hands you have no recourse, whether satisfied or not.

6. Before you sign any papers, read and understand them. Don't sign papers with unfilled blanks. Don't sign a completion certificate (if required by your lender) until all work is completed in full compliance with your contract.

Financing (Continued)—Know Sources of Money

year, you will actually receive \$475. In this case, the \$25 held back is to cover all financing charges. A 5% discount, incidentally, compares with 9.7% simple interest.

In order to qualify for a Title I loan you must own, or be in the process of purchasing, the property involved, or hold it under a lease expiring not less than 6 months after the maturity date of the loan. You must have a good credit record and a regular income.

It's possible to have more than one Title I loan on the same property at one time, but the total balance outstanding may not be more than the largest amount allowed for the type of loan involved.

OPEN-END MORTGAGES

If the improvements you plan are extensive, costing several thousand dollars or more, you will possibly need a tangible security, such as your house itself. If such is the case, you may look into the possibility of an open-end mortgage. Its main advantages are a long term, low interest, and ease of arrangement. But it is not desirable for a small loan.

Not all mortgages include the open-end clause. If yours does, it simply means that you may extend your original mortgage (after several years of payments on the original loan) to include home improvements. The open-end clause varies from company to company, but it will usually fall into one of the following categories: a) a sum large enough to bring the principal back to its original amount, or b) a specified maximum, or c) a percentage of the remaining balance.

Most likely you will be charged the same interest rate as the original mortgage, but your payments will either be larger or over a longer period.

If yours is not an open-end mortgage, it will do no good to try to change it.

"OWN PLAN" LOANS

Because of the acceptance and success of FHA-insured loans, banks and other financing institutions have been encouraged to devise their own plans for making home improvement loans. In general, they are referred to as "own plan" loans.

They closely resemble FHA loans, but there are two attractive differences. You are not limited to FHA's maximum of \$3500, and the restrictions upon use of the money are less rigid. For instance, a bank may see fit to approve a loan of \$5000 with 5 years to repay—that is, if your credit is good and your income is high enough. And you may apply this loan to the purchase of such non-structural things as a swimming pool, carpeting, drapes, etc.

The amount you borrow—large or

small—and the purpose for which you need it are subject only to the approval of the lender.

Because of the increased risk to the lender you may expect to pay a higher rate for this type of loan. You may pay a straight discount of 6%. Or, if your loan is small (less than \$500) you may pay as much as an 8% discount. For a larger loan you may pay on a sliding scale basis with an average discount of at least 6%.

Another favorable feature of the "own plan" loans is a life insurance policy covering the head of the family for the duration of the loan. This may be charged for separately, or it may be included without cost.

REFINANCING

Refinancing, like other methods of money raising, has its pros and cons. In this case, you would take out a new mortgage to replace the old one, using your newly acquired cash to pay off the old mortgage plus cover the cost of improvements.

Let's say you are trying to borrow \$5000 to add a room. The lender you approach will send a man out to study your plans and to appraise your house with its proposed addition. If his appraisal shows that the value of your home will be sufficiently increased, and if you have reduced the principal on your old mortgage adequately you should have no trouble getting the new mortgage.

Much depends, too, on what has happened to the value of your home since you bought it. If it has decreased, or remained about the same, then refinancing would force you to take what loss there may be, and the

size of your loan would undoubtedly be reduced. If, on the other hand, your home has increased in value it might well be that you could borrow more than \$5000.

If your home improvement project is ambitious, and if you don't mind waiting for credit reports and appraisal, then refinancing may be your best bet. You will find, too, that the new mortgages often have better prepayment provisions, allow more time or carry lower interest. By shopping the lenders you will get an idea of what the market will bear.

To round out the picture, here are a few more strikes against refinancing. You will have to bear the expense of taking out a new mortgage (covered in the "Financing" section of this book); and you won't be able to touch your money until the contractor's work is completed. If your contractor insists on being paid while work is in progress, you will need a short-term construction loan, which will be repaid out of the new mortgage.

SECOND MORTGAGE

One of the least desirable ways of getting your loan is by way of a second mortgage. They are becoming nearly extinct (GI and FHA mortgages prohibit them) because of their high risk and burdensome interest rates and terms.

A second mortgage is a subordinate lien on your property. In case of default, and your house must be sold, then the holder of the first mortgage must be fully satisfied before the second mortgage lender gets a penny.

(Continued on next page)

HERE'S WHAT A TITLE I LOAN WILL COST

Cost of improvements	Monthly payment on a 12 month loan	Monthly payment on a 24 month loan	Monthly payment on a 36 month loan	Monthly payment on a 48 month loan	Monthly payment on a 60 month loan
100	\$ 8.78	\$ 4.59	\$ 3.20	\$	\$
200	17.55	9.18	6.39		
300	26.32	13.77	9.59		
400	35.09	18.36	12.78		
500	43.86	22.95	15.97		
600	52.64	27.54	19.17		
700	61.41	32.12	22.36	17.48	14.55
800	70.18	36.71	25.56	19.98	16.63
900	78.95	41.30	28.75	22.47	18.71
1,000	87.72	45.89	31.94	24.97	20.79
2,000	175.44	91.77	63.88	49.94	41.57
2,500	219.30	114.71	79.85	62.42	51.96
3,000	262.71	137.22	95.39	74.48	61.93
3,500	306.11	159.72	110.93	86.53	71.89

NOTE: If you must put up security for the loan, you may expect to pay a fee for recording or filing, documentary tax stamps, title examination and hazard insurance premium. This will be paid as a separate item.

Financing Your Home (Continued)

And there's a chance that's all he would get.

SMALL PERSONAL LOANS

If you must raise a small amount of money in a hurry, and are able to repay it in a short time, then, perhaps, a small personal loan would suit your needs. They are offered by banks and small loan companies.

You will be required to repay in a shorter period than other types of loans. Usually, two years to 30 months is the maximum time allowed. If your credit is good, such a loan may be made on your signature alone. In most cases, however, you must provide a financial statement showing the value of your liquid assets, your income and other pertinent information. For security you may have to sign a chattel mortgage on some of your personal property. Or you may be asked to sign a wage assignment giving the lender the right to collect directly from your employer.

Currently the interest rate on bank loans is about 7% a year. Small loan companies are limited by state law to a maximum chargeable interest of 3% of the unpaid balance each month.

Small loans are an expensive means of raising money, but for the emergency situation their convenience may overshadow their expense.

INSTALLMENT PLAN

Perhaps you will be able to arrange a short time payment plan with your contractor. If the work involved is not

too costly, your contractor may agree to accept three monthly installments.

Many of the larger or better-established firms can afford to carry their own installment contracts. But most contractors cannot afford to lend money to their customers, so they sell your contract to a bank or a finance company. "Rediscouinting," as it is called, relieves the contractor of any risk.

You may be attracted by the idea of not having to shop around for financing arrangements, but, on the other hand, the program that your contractor offers may not be the most satisfactory. You have the privilege of comparing costs and shopping to find the most economical financing.

Before signing an installment agreement study its wording and get full information on the charges made. A high "carrying charge" or "investigation charge" may be disproportionate to the size of the principal. It may further indicate to you that you may be better off dealing directly with a bank or loan company. But if you find such charges to be equitable (so that your *real* cost of financing is equal to, or lower than, that charged by a bank or other lender) this might be your best way to finance a comparatively small job.

In the final analysis, regardless of how much money you need or how long you need it, in order to avoid disappointment and wasted money you should shop the financing institutions and the various types of loans available to you.

WHAT QUALIFIES UNDER TITLE I

According to the Federal Housing Administration, a "Title I," or home improvement loan is made available to the public expressly for the purpose of "alterations, repairs, and improvements upon or in connection with existing structures which substantially protect or improve the basic livability or utility." Below are the major areas of home improvements which do qualify for an FHA-insured loan.

REMODELING—Structural alterations—converted attic or basement—added room or garage—built-in cabinets, and built-in appliances.

PAINTING & DECORATING—Protection and fresh color—exterior and interior—wallpaper—floor finishing.

WEATHERPROOFING—Siding—roofing—insulation—storm sash and doors—gutters—caulking—weatherstripping.

PLUMBING & HEATING—Modernization—piping and fixtures—extra bath—hot water system—sewage dis-

posal—heating systems—built-in garbage disposers.

WIRING—Better lighting and fixtures—outlets—safe and adequate electrical system—heavy duty circuits.

MASONRY, PLASTER & CEMENT WORK—Wallboard—tile—moleum—floor and porch repairs—driveway—fencing.

AND OTHER IMPROVEMENTS—Such as patios, porches, septic tanks and all built-in appliances which become a permanent and integral part of the house. Borrower must be the home owner, or in the process of purchasing the property.

A Title I loan may not be secured to finance furniture, landscaping, swimming pools, lawn sprinkler systems, TV antennas, free-standing appliances, and other such nonstructural things. Additionally, if you are building a new house and run short of capital, Title I won't help you.

Finally, if the work you are having done calls for the services of an architect or engineer, his charges may be covered by the loan. Likewise, the building permit fees may be included.

RATE YOUR BATHROOM

No one needs to be reminded of the inconveniences caused by inadequate bathroom facilities. There are off-to-school, off-to-work traffic jams. Privacy is often out of the question. Check the convenience rating of *your* bathroom facilities against the following list:

1. Do you have one bathroom or powder room for each two people in your family?
2. Do you have built-in bathtubs?
3. Are the fixtures, floors, and walls easy to clean?
4. Does each complete bathroom have showering facilities?
5. Does the bathroom lavatory have a mixing spout (rather than separate hot and cold spouts)?
6. Is the toilet quiet and efficient?
7. Is the seat free from chips or mars?
8. Is the medicine chest adequate?
9. Do you have enough towel bars, robe hooks?
10. Do you have enough storage space in your bathroom?

Three or more "no" answers would indicate you have a need for an additional, or an up-dated bathroom.

Improving Existing Bathroom

Modernizing may be easier than you think. It doesn't always require the addition of another bathroom or expensive changes in room layout. An added lavatory in your present bathroom will allow dad to shave while junior is using the other one.

Adding a Powder Room

A powder room will be a great convenience. If it is primarily for guest use, try to locate it near the living room or entrance. If the powder room is to be for family use, it is best to locate it near the kitchen or the entrance to the children's play area. The latter location will be a great time saver for mother. Equally important, its convenience will help the children form good habits of personal cleanliness.

Extra Bathrooms

Often the real need is for a complete additional bathroom. Your first problem will be where to put it; your second, what to put in it; and the third, how to plan it for maximum convenience, easy cleaning, and pleasing eye-appeal.

The minimum space required for a full bathroom is an area five feet by six feet, though a larger area is desirable. An unused bedroom, a hall end, an unusually large clothes closet all offer space possibilities for that second bathroom.

At this stage, you will probably need some professional advice. Your plumbing contractor can be very helpful in choosing a location which will permit a most efficient and economical installation. He can also supply you with literature and catalogs to help you make the next major decisions—what to put *in* the new bathroom.

REMODELING MAGIC

Bathroom

If your home is still relatively new, there is ample opportunity and often need, for additional bathrooms. This may take the form of another bath upstairs or a powder room on the first floor or a shower in the basement.

Still another form of expanded plumbing facilities lies in expanding the equipment in the present rooms. For instance, you might add a lavatory in either a bathroom or in a bedroom. This last feature has become increasingly popular in recent years.

The trend in American homes is undeniably toward more bathrooms per house. Some authorities go so far as to seriously recommend a bath for each member of the family. To be practical, however, it would not be out of the question to suggest a bathroom, or at least a half bath, for each bedroom in your home.

The crying need for more baths per home is obvious from the many advantages they offer the family. These advantages include convenience, time-saving and privacy for the larger families of today.

Also, the former concept that multi-bath homes are earmarks of luxury and wealth has gone by the boards. Today's families need two or more bathrooms.

Now in the case of older homes we have all the possibilities touched on above with the addition of bringing the rooms up to date. Today modern baths are a show place within a home. Years ago when the bathroom was brought indoors after centuries at the end of the path, it was spoken of only in whispers.

New plumbing fixtures in designs unheard of just 20 years ago and subtle shades of color have added zest to our bathrooms. A whole new art of decoration has been developed in recent years that has put wallpaper and wall-to-wall carpeting in these rooms. Glass shower enclosures for shower stalls and bathtubs add a note of luxury where before we had only damp shower curtains.

In the way of new fixtures the plumbing industry has introduced some revolutionary designs. One of the most popular of these post-war developments is the counter-top lavatory that can pep up the charm of the most humble room. It serves the dual purpose of providing counter space around the lavatory itself and offers storage space beneath and along side of the unit. Many models have space for cleaning materials, soiled laundry and linens.

Probably the most unexpected recent development is a water closet that is mounted on the wall and whose tank is concealed in the wall. Since

the unit hangs on the wall there is no base resting on the floor, a boon to housewives who for generations have been complaining about the messiness of cleaning such dirt-catching bases. The narrow tank fits neatly between studs. It is only $\frac{5}{8}$ inches deep. The access wall panel may be installed on either side of the wall.

Another innovation is the single handle water faucet for lavatories. It delivers hot, cold or tempered water at the touch of a single lever. No king could have ordered as much a quarter century ago.

Color in plumbing fixtures is so accepted today that not only is there a wide range of pastel colors but manufacturers have added a series of subtle shades that blend in with any decor-

ating scheme. While white fixtures are still more popular, color accounts for about 25 per cent of all plumbing fixture sales.

Now how does a home owner go about having his bathroom brought up to date?

The best procedure is to determine what brand of plumbing fixtures you want and then call a licensed plumbing contractor. The plumber can, in effect, serve as a general contractor. He can handle the entire job, including carpentry, electrical and tiling work. His knowledge of building codes and piping requirements will be of inestimable aid. He can, in most instances, arrange for financing.

One important tip, don't settle for anything but the best in the way of plumbing fixtures. Their cost is only a part of the total installation. The additional cost of the best fixtures is insignificant and since the cost of installation remains the same no matter what price plumbing fixtures you select you will do well to take advantage of the new designs available.

Kitchen

If your kitchen has not been remodeled, or at least "up-dated," in the past five or six years the chances are you are working harder and you are less comfortable than you could be. A remodeling job would probably change your entire outlook on kitchen chores.

Further, if you plan to sell your home within several years, no other room in your house will be as important as a sales clincher.

To replan your existing kitchen, first consult the accompanying article, "Rate Your Kitchen." Using the ideal as a guide, determine what changes and improvements are necessary. You will be limited, of course, by existing conditions, such as floor space, and window and door openings. In most cases it is too expensive to rearrange your kitchen floor plan, but it may be possible to gain a better grouping of work centers and more conveniences. You will be limited, also, by the amount of money you can spend. Therefore, good judgment is necessary to determine the extent to which compromises may be made.

Whether your coming investment involves hundreds or thousands of dollars it should be done right. It may take a little time, but it's worth it. Make these planning stages a family project and have fun doing it.

First make a rough sketch, using square-ruled graph paper, and marking the locations of all existing doors, windows, equipment, heating devices, pipes, wiring, and adjoining rooms connected by doors. Then, using the principles set forth on these pages, establish the most desirable space requirements of equipment, work counters and storage. Work them into

your sketch with as little change as possible from the existing plan. Next, fit in the cabinets and counters. Make sure your measurements are exact. Determine what changes are necessary in the plumbing, heating or electrical wiring.

Now sit back and review these general considerations:

1. Remodeling may be a long-time investment. Evaluate changes in terms of cost and immediate needs, and plan to work toward the ultimate goal.
2. Make the essential changes first, others as money allows.
3. Major structural changes should be made first.
4. If there are several structural changes of the same type, it is generally cheaper to make them all at the same time.
5. Consider temporary changes because of immediate needs.
6. Consider equipment which may be added at a later date, such as an electric sink. Plan for the proper wiring and plumbing installations to accommodate these at the time of remodeling because it is cheaper to make these changes then.
7. The size of your present kitchen generally determines the size of your new kitchen.
8. Look for ways of gaining more space if the room will not accommodate everything you need in it. Try closing off a door, or shortening a window.
9. It is not always practical to build partitions to set off the working area. However, the same results can be obtained by regrouping the equipment itself to form imaginary walls. If a

(Continued on page 34)



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Kitchen Remodeling

(Continued from page 32)

low partition is built above the equipment, consider its height. It should conceal kitchen clutter, yet allow a view of the worker's face. With a compact working unit in one part of the room, the extra space is free for a dining area, laundry, etc.

10. In order to avoid costly structural changes, it is not always practical to install the desired size center. In such cases, if one center must be smaller than recommended, the other two centers should be increased in size, so that the total amount of storage space and counter surface is met. Due to the importance of work counter space at the preparation center, try to maintain specified size. (36" to 60")

Now you are ready to present your case to a specialist. Seattle has several outstanding kitchen remodeling specialists who have left a trail of satisfied customers. But alas, the contracting field has attracted its share of bad apples. So don't snap up the first contractor who comes along. This is too large an investment to gamble on.

It is to Jesus Christ we owe the truth, the tenderness, the purity, the warm affection, the holy aspirations which go together in that enduring word—home; for it is He who has made obedience so beautiful and affection so holy; it is He who has brought the Father's home so near, and has taught us that love is of God.

—James Hamilton



RATE YOUR KITCHEN

Few kitchens are perfect. In fact, if your house is more than six years old, or if it was of inexpensive construction, chances are it needs some up-dating or remodeling.

The check list suggested here is based on a perfect kitchen. By comparing your kitchen with it you will find weaknesses, some of which may be easily eliminated. Or it may point out your need for a major remodeling job.

AN IDEAL KITCHEN SHOULD HAVE:

1. A step-saving, traffic-free work triangle. Distance between sink and range should be 4 to 6 feet; between range and refrigerator 4 to 9 feet; between refrigerator and sink 4 to 7 feet. You should travel not more than 22 feet and not less than 12 feet.
2. Sufficient space to permit proper use of each area, including
 - a. Work space for food preparation, serving and cleaning.
 - b. Counter space in each work area. 11 to 13 feet total.
 - c. Storage space. Six feet of shelf space for each member of family.
3. Good location in relation to dining

area, service entrance, phone, front door, children's play area, other rooms and a source of natural light.

4. Well-routed, unobstructed flow of traffic, avoiding work areas.
5. Placement of appliances and cabinets so that open doors do not obstruct them.
6. 8½ to 13½ feet of base cabinets, including under sink and stove.
7. Cabinet or drawer space which offers very accessible storage of convenience items.
8. Work surface with adequate leg room and correct height for working while sitting.
9. Modern appliances, including garbage disposer, dishwasher, built-in oven and surface burners, and freezer.
10. Adequate lighting for all work areas, avoiding glare and shadows.
11. Adequate wiring, with enough circuits and convenient outlets to take care of present and future needs.
12. Adequate ventilation, preferably with a fan or blower to remove excess moisture and odors.
13. Surfaces and equipment which are easy to clean.
14. Durable surface coverings on walls, floor, work surfaces and cabinets.
15. Colorful and attractive decor.



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In Review...

CHOOSING A CONTRACTOR

Articles telling how to choose a contractor are found elsewhere in this magazine, but we will repeat the most important suggestions:

1. In getting a bid, make sure specifications have been followed to the letter. Have a thorough plan conference with the contractor.

2. Don't judge a contractor by his showroom (or lack of one).

3. Recommendations for good contractors may come from satisfied friends, architects, Home Builders Association, wholesalers, and from *The Homebook of Greater Seattle*.

4. If in doubt, check the contractors' financial responsibility through his bank, or, perhaps, through a credit reporting organization.

5. Check reliability of the firm through the Better Business Bureau or the Chamber of Commerce.

6. It is advisable to get a contractor who will accept responsibility for the entire job. This helps to avoid misunderstandings and incompleteness of work.

Prices quoted by reliable contractors may surprise you. They take pride in their work, and they are interested enough in your satisfaction to insist on using excellent materials and workmanship. They may cut a corner here and there, but only to give you the most for your money. On the other hand, the bad actor will throw the cheapest of materials into the job just for the sake of being low bidder. He is selling price—and not satisfaction. Remember that it is cheaper in the long run to have the job done properly at the outset.

Finally, leave plenty of time for the job. Your contractor will have to assemble all the necessary materials, and, depending on the availability of such things as cabinets, this might take several weeks.

Employing patience and wisdom along with your careful planning will help to make your remodeled kitchen a dream come true.

In the homes of America are born the children of America, and from them go out into American life American men and women. They go out with the stamp of these homes upon them. And only as these homes are what they should be will they be what they should be.—J. G. Holland

HOMEBOOK OF GREATER SEATTLE

Remodeling Ideas

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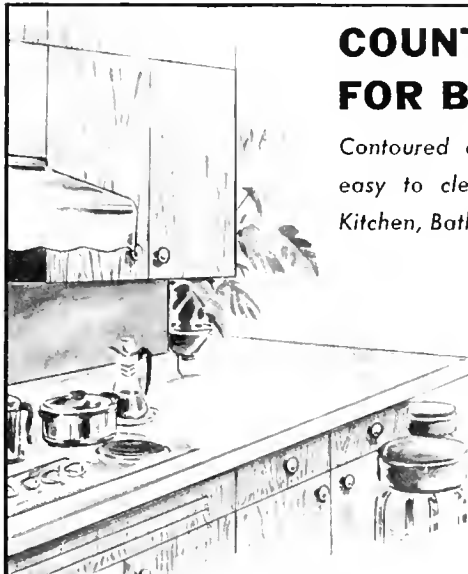
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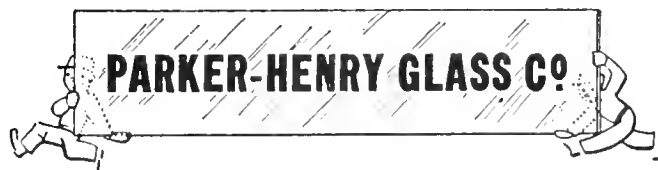
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SELECT YOUR APPLIANCE WITH CARE

No modern home can function smoothly if you remove just one of the basic appliances. Modern homemakers have become so dependent upon the four basic appliances—range, refrigerator, water heater and laundry equipment—that we often pause to ask ourselves, "How did Grandmother ever get along without such conveniences?" Well, the truth is, it was Grandmother's need, Mother's need, and now YOUR need for better appliances that has resulted in tremendous improvements in our household servants.

For years we have heard appliance manufacturers toot their horns for "more leisure time." It's true, thanks to them, that we have more spare time, but the average homemaker still spends at least 45 to 50 per cent of her working time in the kitchen. Further, she spends up to four to six hours each day watching television. In fact, a moderately equipped family of four gets nearly 2,000 hours of operation each month from its appliances. It's easy to see what an important role appliances play in our lives.

That's why we should know how to determine our needs, buy right, care for and use each appliance properly, and what to do in case of emergency.

Because we have to live with what we buy it is extremely important that we buy from the right source. If we do, then we may be reasonably certain of getting the know-how, personal treatment, guarantees, good price and service that we are entitled to. But the question arises, "How can I find out who to deal with?" Here are several suggestions:

1. Note advertising. Most sales are legitimate, but be cautious of frequent sales and outlandish comparative prices. Other danger signals are "dam-

The Dealer—His Services

By WARD DAVISON

Low price is the bait offered to many buyers. Price alone can be very misleading. Let us look at the other services provided by the reliable and ethical retailer.

aged in shipment" sales, "less than wholesale" claims, "fire" sales, etc. Most appliance dealers never engage in such sales. Beware of bait advertising which lures you into a store, but the advertised piece is "sold." Finally, remember the "loss leader" sales featuring a very low cost promotional model of appliance. They are a good buy if you are interested *only* in price. The old axiom, "you get what you pay for" is practically inescapable.

2. Call the Better Business Bureau. Remember, they can't recommend, but they can give you a report on the reliability of a specific firm.

3. Note the store itself. Is it neatly kept? Are appliances well displayed? Are there service facilities, or adequate arrangements for another firm to perform service responsibilities? Beware of a carnival atmosphere and garish signs with claims such as "We are never undersold."

4. Note personal treatment. Are personnel neat and clean? Courteous? Quick to answer questions? Is a demonstration available? Be cautious of high pressure, but please don't mistake high pressure for good salesmanship. A good salesman is supposed to be persuasive. Don't sign anything until you read and understand it.

5. Be satisfied that warranty and guarantee are adequate.

6. Don't judge on the basis of store size, frequency of advertising, lack of artistry in displays or apparent capitalization. Some of the smaller stores are among the better dealers.

1. He provides a convenient shopping location for the customer and quite often other facilities, such as free parking.

2. He provides adequate display of merchandise. The pre-selection made by the dealer helps to eliminate sub-standard merchandise. (Experienced dealers are able to do a more thorough job of selecting the best products offered by the manufacturer.)

3. He assumes the liability of transportation of merchandise from the distributor's warehouse to the store and then to the home of the customer. (Thorough checking of merchandise before delivery to the customer often saves disappointing experiences and costly mistakes.)

4. He should be able to provide experienced and reliable service on all the products he sells. The dealer who maintains his own service department is usually in a better position to render prompt and personalized service. This extra attention can be very valuable to the user.

5. He should provide salesmen who are properly trained in product knowledge, as they have a responsibility to help the customer choose the product best suited to his needs. Reliable, efficient and friendly salesmen are a result of store management. Stores which have a reputation for excellent treatment of salesmen and customers naturally attract the higher type sales person.

6. He should provide the customer an outlet for his used merchandise. A

(Continued on page 39)



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New raised non-spill rim, removable chrome rings and drip pans, 7-heat rotary switches.

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The Dealer—His Services

(Continued from page 37)

store with a good reconditioning department and reputation for selling reliable used appliances is in a more favorable position to allow more on trade-ins.

7. He generally has been in business long enough to have established his policy of providing plus values. The willingness to go beyond written warranties. Many things can happen to electrical appliances that require special attention. (Cabinet defects, excessive noise, need for different door openings, improper installation resulting in fire or other damage, inadequate stock of repair parts which would result in delay of repairs, availability of service on Saturday or in evenings, etc.)

8. He should be able to provide credit terms for those who are not able or do not choose to pay cash. Here the dealer's reputation for dealing with his customers is most important. (If in doubt contact your local banker or the Better Business Bu-

reau.) A fair "service charge" for buying on time should be expected, but make sure you know the total amount of charges before signing a contract.

The eight functions listed are just a few of the various services performed by most reliable dealers. Many more could be listed if you want to consider the value of the retailer to the community. His contribution in taxes, in providing employment, his leadership in service and commercial clubs, the time he spends in other community activities like UGN, the Scouts, YMCA, PTA, the Church and many other organizations which have become a vital part of our everyday living. Very seldom, if ever, do you hear of the "discount" house operator taking part in such activities.

The discount operators admit that the retailer's sales floor is a necessary adjunct to the operation of a "discount house."

On the retailer's floor the purchaser

receives his education at the expense of the retailer. The "discount" saves this expense and pretends to share part of it with the person who has done the "shop lifting."

The monetary value quite frequently is very small, but people are always trying to "get something for nothing," or trying to get a better deal than his neighbors. This attitude is responsible for the "gypo" dealer.

Misleading advertising is another danger signal to watch for when choosing the place you wish to do business. Retailers who are honestly and sincerely trying to serve the public need the support of the people who think our economic system is fundamentally right. The failure of our retail system could be just as disastrous as the failure of our banks. Every family can have a part in building a better climate in which to do business. The choice is simple. They can be part of the cause of failure, or part of the cure that brings prosperity and enjoyment to all.

APPLIANCE OPERATION COSTS

(In Seattle City Light Service Area)

Listed below are the average costs, based on appliances of typical wattages, used by an average family of four, for an average number of hours. Your costs will undoubtedly vary. Costs are figured on the all-electric rate of 500 kilowatt-hours for \$5.00 (or 1¢ per kilowatt-hour). After 500 kilowatt-hours the rate drops to 7 mills for the next 2000 kilowatt-hours and 9 mills thereafter.

Costs on the standard rate are higher. For instance, on the all-electric rate 500 kilowatt-hours costs \$5.00 as compared with \$6.27 on the standard rate.

*All-electric rate is offered to customers who do their cooking and water heating electrically and whose water heater is an approved-type, insulated, automatic tank of 40-gallon size or larger

**Does not include electricity to heat water. Hot water cost for dishwashers is about 1½ cents (at 7 mills per kilowatt hour) per complete washing. Hot water cost for automatic washers varies from 2½ to 5 cents per full tub of wash, depending on type used. Hot water cost for conventional washer is about 3½ cents per full tub of wash.

***Does not include large uses of electric heating which may involve 1.8 cents per kilowatt-hour "seasonal use" rate.

For further information regarding rates contact Seattle City Light.

FAMILY OF FOUR AVERAGE PER MONTH

APPLIANCE	Average Watts	Hours Operation	KWH Use	Operating Cost on All-Electric Rate
Blanket	190	80	15	\$0.15
Clock	2	720	1	.01
Coffee Maker	400	12	5	.05
Corn Popper	660	3	2	.02
**Dishwasher	1200	30	36	.36
Disposal	375	2	1	.01
Dryer	4600	20	92	.92
Fan (Kitchen)	250	30	8	.08
Fry Pan	1150	25	29	.29

Fryer (Deep Fat)	1650	4	4	.04
Freezer	300	170	51	.51
Heat Lamp	250	10	3	.03
***Heater, Auxiliary	1320	30	40	.40
Heating Pad	65	10	1	.01
Iron	1000	12	12	.12
Ironer	1500	12	18	.18
Lamp, 100 watt	100	90	9	.09
Lawnmower	1000	8	8	.08
Mixer	150	4	1	.01
Oil Burner	500	100	50	.50
Radio, Console	75	120	9	.09
Radio, Table	50	120	6	.06
Range (Family of 4)			100	1.00
Refrigerator	200	120	24	.24
Refrigerator-Freezer	250	160	40	.40
Roaster	1320	30	40	.40
Rotisserie	1400	30	42	.42
Sunlamp	400	10	4	.04
Television	200	120	24	.24
Toaster	1150	4	5	.05
Vacuum Cleaner, Tank	600	10	6	.06
Vacuum Cleaner, Upright	370	10	4	.04
Waffle Iron	1100	1½	2	.02
**Washer, Automatic	250	12	3	.03
**Washer, Conventional	200	12	2	.02
Water Heater (Family of 4)			400	4.00

Extra Care Adds Extra Life to Your Range

Your range, like any other piece of equipment, will give you added years of service with just a little care each day. The following cleaning hints are suggested by most manufacturers:

Range Top

1. Turn off all switches.
2. Don't use a damp cloth to wipe porcelain range top while still hot. This may cause cracking of the porcelain.
3. Immediately wipe away spillage, especially high acid foods such as milk, tomatoes, fruit juices. They may cause a permanent stain.
4. Clean with warm water and mild soap. Abrasive cleansers may scratch.
5. Hot utensils just off the burner should not be placed on the porcelain.
6. Chromium trim may be washed with soap and water. Chrome polish may be used.

Surface Units

1. *Enclosed tubular type:* This type is self-cleaning. Food spillage usually burns free. Enamel from some utensils may melt onto burner on "high" heat, but this will eventually wear off. Units may be cleaned with damp soapy cloth or mild cleanser when they are cool.

2. *Ring type:* This type, characterized by 2 or 3 wide rings (or a single flat plate), may be cleaned by rubbing with steel wool or mild cleanser. Wipe dry, then rub top surface with heavy waxed paper.

3. *Open coil type:* Loose food particles may be removed with a soft bristle brush.

4. Reflector pans under the units should be cleaned often. The removable type, if enamel, may be cleaned with a soda solution or fine steel wool. The aluminum pans may be cleaned either with soap and water or fine steel wool and boiled in a solution of half vinegar and half water; or a cream of tartar solution, using 3 tablespoons of cream of tartar to 1 quart of water. New chrome reflector pans are available for all units.

5. Do not line reflector pans with aluminum foil. It may make contact with the electric terminals and burn out the unit.

Oven

1. Clean only when cool.
2. Wipe away grease stains around oven door with soapy cloth.
3. Remove racks and wash. If soil persists, soak racks in hot ammonia water. Use a stiff brush for stubborn spots. Dry oven racks well. If you have an old range, oil racks after cleaning to prevent rusting.
4. Remove upper and lower heating units, if removable. Over the lower unit you will find a heat distributor, or baffle plate. It may be washed with a hot soapy cloth, or a mild cleanser

may be used. Always avoid getting water on the heating units. Rinse and dry thoroughly each part as it is cleaned.

5. Wash oven lining with soap and water, being careful not to disturb the metal strip to the thermostat. If oven becomes grease-spattered often, use lower heats while roasting, or use a lower rack position while broiling.

6. Clean broiler pan and rack each time they are used. Stubborn greases may be loosened by soaking in water and detergent. Only with an enamel broiler pan may baking soda be used for grease removal.

7. Be careful not to get oven heating units wet. Thoroughly dry oven, and leave oven door slightly open to allow moisture to escape.

8. Each time oven is used leave door partially open until oven is cool. Otherwise, over a period of time condensed moisture may rust parts of the oven.

9. Do not use aluminum foil near oven units or on oven lining. Coils may be burned out, or thermostat ruined, or, under high temperature, foil may fuse to oven liner. Further, proper circulation of air is impaired.

10. A badly soiled oven may be cleaned as follows: First, place newspapers on range surface and on floor beneath it. Plug vent opening with paper or cloth. Rub interior of oven with a cloth saturated with household ammonia. Place cloth on a saucer containing about $\frac{1}{4}$ cup of ammonia, then place saucer on the least soiled portion on the bottom of the oven. Close oven door and permit ammonia to remain in the oven overnight or for at least eight hours. Then wash oven with warm, soapy water, using fine steel wool or mild cleanser to remove stubborn soil. It may be necessary to repeat this treatment if soil is exceptionally bad. Be sure to remove paper or cloth from oven vent after cleaning.

Stretch Your Dollars When

BUYING A USED APPLIANCE

By DON D. NELSON

With a limited budget should I buy a brand new appliance of a lesser known brand or a top grade used appliance? Do I need this appliance for a temporary use or do I plan on using it for some time to come?

Values

Very often brand name good used appliances are a much better value because appliance manufacturers do not drastically change models every year.

Where to buy used appliances

1. Dependable appliance dealers with a good service shop and reconditioning facilities.
2. Newspaper advertising indicating a transfer, broken home, or liquidation of an estate.
3. From an individual who is disposing of a surplus appliance, not having received a trade-in on their recently purchased new one.
4. The least desirable is "damaged in shipment" disposal sale. Internal damage may be extensive, and manufacturers are reluctant to make such repairs.

Depreciation

Appliances depreciate approximately 40% the first year and 10% per year through the sixth year.

NARDA (National Appliance Radio Dealers Association) has published a trade-in guide called the Blue Book

for their members. It does an excellent job of breaking down all standard brand name appliances model by model back 13 years. It lists the original selling price, also size and type. From this blue book a dealer can give the customer a fair trade-in price for their appliance.

Guarantee

TAG (tested, approved and guaranteed) appliances 1 to 2 years old should carry a six-month guarantee including parts and labor. Appliances 2 to 4 years old carry ninety days labor, and the customer pays 50% of the parts needed. Any older quality appliance should have a thirty days' labor guarantee, with the customer paying for all parts.

Appliances which are purchased from a responsible dealer should be delivered and set up in a good operating manner, and proper operating instructions be given the customer at the time of the delivery. Many appliances have been ruined, or their life shortened, by improper setup.

Life expectancy of new appliances

1. Washers—Automatic washers about six-year life.
Wringer washers about ten years.
2. Dryers—Approximately 8 years.
3. Ranges—Approximately 10 years.
4. Refrigerators—Approximately 13 years of useability.
5. Freezers—15 years.
6. Dishwashers—7 years.

How to Buy— How to Maintain— YOUR REFRIGERATOR

By TOM CARMICHAEL

and

Seattle City Light

Before buying a refrigerator, consider first the fact that it represents a sizeable cash outlay and, therefore, should be approached sensibly and without haste. Before visiting an appliance dealer make up your mind to get the most for your money—not just for the present, but for all the years you expect your refrigerator to last. To do this, three basic rules are suggested:

1. Buy through a reputable, dependable dealer or department store. If in doubt, check with sources listed in introduction to this section.

2. Buy a refrigerator made by a reliable manufacturer.

3. Carefully check guarantee and warrantee and compare it with others for similar models.

What Is Available?

1. *Doors.* Right or left hand opening doors are available. Keep in mind the layout of your kitchen.

2. *Size.* Make sure the model you are considering can fit through kitchen door, and into space provided for it. A family of four or more will best be served by a refrigerator of 11 to 15 cubic feet.

3. *Finish.* Outside may be baked enamel or porcelain. The latter is more expensive and more resistant to stains, discoloration, etc. Inside finish is porcelain, and ice cube trays and freezing compartment are usually aluminum.

4. *Shelves.* May be stationary, roll-out or revolving, and are made of anodized aluminum, steel or chrome. Check for ease of cleaning.

5. *Defrosting.* Manual defrosting or self-defrosting refrigerators are available. True freezer compartments always require defrosting, even in a self-defrosting unit. A freezer or freezing compartment which is actually self-defrosting is not a true freezer.

6. *Efficiency.* A refrigerator should be capable of maintaining a temperature of 38 to 42 degrees F. A true freezer will hold food at 0° F., and a freezing compartment or "ice-cube compartment" will hold about 7 to 15 degrees F.

7. *Combinations.* Refrigerator-freezer combination units with freezer at top or bottom add great variety to possible choices. Such units are highly desirable if a food freezer is not owned.

8. *Other features.* Automatic ice-

makers, purifying lamp, circulating fan, hydrators, etc., are all sales features which give greater convenience, but, of course, add to the cost.

Suggested Cleaning Procedure

1. Follow the manufacturer's instructions if booklet is available.

2. All spillage should be wiped up as soon as possible to avoid permanent stains. This is essential with high-acid foods.

3. With manual defrosting refrigerators defrost when there is an accumulation of 1/4-inch of frost on the cooling unit. First, set temperature control at "defrost" reading. Remove freezing compartment trays. Make sure drip tray is empty and in place to catch melting frost. Defrosting may be hastened by placing trays of hot (not boiling) water in compartment, keeping doors open. All frost should be removed completely. Overnight defrosting may be accomplished just by turning control to "Defrost." Remember excessive frost reduces cooling efficiency, collects odors and wastes electricity. Automatic defrosting controls may be purchased separately.

4. While defrosting give refrigerator a good cleaning, mainly for sanitation purposes. Remove all food and shelves. Remove frozen foods from freezer and put them on a shelf of the refrigerator so that they will not thaw while defrosting, then defrost as quickly as possible. Clean entire interior with a solution of one tablespoon of baking soda to two quarts of warm water. Wipe again with a clean moist cloth, then wipe dry. Baking soda counteracts food odors.

5. Wash the door gasket with mild detergent or soap and water. Be sure to include the hard-to-reach areas. Rinse and dry thoroughly.

6. Clean and dry all food containers before returning them to the shelves.

7. Clean exterior with a damp cloth, or with warm water and mild soap, then rinse and dry. Remove stubborn stains with silver polish. Some manufacturers provide a special polish for exterior.

8. Clean the condenser once or twice a year. Dust interferes with the cooling efficiency of the unit, making the motor run longer. Disconnect refrigerator, then remove dust with a long handled brush (such as a paint brush) or a vacuum cleaner attachment.

Care of the Refrigerator

1. Follow manufacturer's instructions if booklet is available.

2. **COLD CONTROL** should be set to hold temperature to about 40° F. Temperatures ranging from 37 to 45 degrees are sufficient. When leaving your home for several days turn cold control to its warmest setting (not "defrost").

3. **KEEPING ICE CREAM** or large quantity of food in the freezing compartment calls for a lower temperature temporarily.

4. **DON'T OVERLOAD** refrigerator because this hinders cold penetration (unless you have a high humidity type of refrigerator). If crowding is necessary, stack containers of different sizes to afford better circulation of air.

5. **COVER FOODS** to retard drying (unless you have a high humidity type of refrigerator).

6. **LET HOT DISHES COOL** before putting them in the refrigerator. To hasten cooling, place pots or pans in cold water.

7. **DON'T OPEN THE DOOR** or leave it open any more than is necessary.

8. **DON'T USE SHARP INSTRUMENTS** to chip ice or frost from freezer unit or to loosen trays. You may puncture one of the coils which hold the refrigerant.

9. **COOL LOCATION** is best for refrigerator. Avoid direct sun, radiators, etc. Recommended air space around refrigerator is 2½ inches in back and 6 inches above the top.

10. **GASKET IS IMPORTANT.** Because grease is harmful to rubber, clean immediately if grease is present. Use soap and water. Avoid touching gasket as much as possible. Occasionally check to see that the gasket is making a proper seal. This may be done by closing refrigerator on a dollar bill. If you feel a slight tug gasket is sealing well; if not, the condition should be corrected. You may have a worn gasket, or a loose latch or hinge. If gasket gets loose or becomes soft and sticky, replace it immediately.

A happy home is the single spot of rest which a man has upon this earth for the cultivation of his noblest sensibilities.

—F. W. Robertson

FREEZER LIVING—A NEW WAY OF LIFE

By EMMETT LENIHAN and BOB O. BLAINE

A food freezer can be an asset to any family, regardless of size, economic status, eating habits, or food likes or dislikes. Through freezer use any family can save time and work, enjoy better nutrition, save money, and have the convenience of a well-rounded supply of foods available at all times. It is the symbol of a new and revolutionary phase in modern living.

When a food freezer is to be purchased the consumer has a choice of either the upright or the chest type.

Let's first consider the upright styles. Food capacity is as much as 700 to 800 lbs. depending on its size. This is in contrast to the average refrigerator storage of 70 to 80 lbs. of food. An upright freezer offers the advantages of less floor space, convenience of moving and removing food, plus the fact that it is better equipped to handle non-fluctuating temperatures under normal storage. It will also sharp freeze at a faster rate—an important factor in the freezing and preservation of foods.

A chest-type freezer fits where height limitations are encountered in the home. Its efficiency is slightly lower than that of upright freezers, but it is still capturing about 50 per cent of the market. This is due mainly to the fact that the chest-type freezer is cheaper to manufacture, and, therefore, lower in cost.

ADVANTAGES

Here are a few examples of the many advantages afforded by a freezer:

1. Any freezer family can save money on leftovers. The U. S. Dept. of Agriculture estimates that the average family in this country wastes from 5 to 12 per cent of what it spends for food on leftovers. This waste can be eliminated by freezing left over foods.
2. Quantity purchase of foods means lower cost.
3. Fishermen and hunters enjoy their catch or kill the year around.
4. Quantity cooking in advance of meals saves time and affords longer range planning.
5. Unexpected guests are never a problem.
6. More leisure time for housewives.
7. Health and nutrition benefits.

To assure satisfaction and a wise purchase, consider these points before buying:

1. *Size.* To meet family needs, the average requirement is 6 to 10 cubic feet of space per person.
2. *Space.* Will freezer fit through your doorways? Are there height or width limitations?
3. *Floor strength.* Is your floor solid

enough to hold a heavy weight? The weight of a chest-type freezer is distributed over a larger floor area; the weight of an upright freezer is concentrated on a smaller area.

4. *Electrical outlet.* A freezer should be plugged into a separate electrical outlet.

5. *Brand.* Is manufacturer established, with solid merchandising program? Are advertising claims all true?

6. *Service and parts.* Are they readily available?

7. *Guarantee and Warranty.* Understand the conditions of each. Will dealer comply, and what are his facilities for emergency service?

8. *Special features.* What are your particular needs?

9. *Temperature.* Does the freezer maintain true zero temperature, and can its control be adjusted easily?

Defrost when the accumulation of frost reaches about 1/4-inch thickness. Heavy frost acts as an insulator and decreases the efficiency of your freezer. Defrost two or three times a year.

To defrost...

1. Clear a space by moving packages to another part of the freezer.
2. Lay newspapers on the bottom and scrape the frost off onto a paper.
3. Use a stiff brush or a smooth

MEAT STORAGE CHART

	Refrigerator	0° Freezer
BEEF		
Standing rib roast	5-8 days	10-12 mos.
Steaks	3-5 days	10-12 mos.
Pot roasts	5-6 days	10-12 mos.
Stew meat	2 days	6-8 mos.
Ground beef	2 days	4-6 mos.
Liver and heart	2 days	4-5 mos.
PORK		
Ham	7 days	8-10 mos.
Ham slices	3 days	6-8 mos.
Roasts	5-6 days	8-10 mos.
Chops	3 days	8-10 mos.
Spareribs	3 days	6-8 mos.
Pork sausage	2-3 days	3-4 mos.
LAMB		
Roasts	5 days	8-10 mos.
Chops	3 days	8-10 mos.
Liver	2 days	4-5 mos.
VEAL		
Roasts	5-6 days	8-10 mos.
Chops	4 days	8-10 mos.
POULTRY		
All types	2-3 days	8-12 mos.
Giblets	2 days	3 mos.
Liver	2 days	6 weeks

wooden or plastic paddle. Don't use a metal scraper.

To clean...

Once a year, preferably when food supply is lowest, clean your freezer thoroughly.

1. Turn off electricity.
2. Remove packages and place in heavy cardboard boxes lined with newspapers, or cover boxes with heavy blankets.

3. Defrosting may be hastened by placing a fan or pans of lukewarm water in freezer as soon as electricity has been shut off. Never use hot water.

4. After thawing, wash the inside with solution of warm baking soda. Use 3 tablespoons of baking soda to 1 quart of water. Then wipe dry.

5. Turn on electricity. When 0° F. is again reached, return the food to the freezer.

In case of failure several checks should be made prior to calling a service man:

1. See if cord is plugged into outlet properly.
2. Plug a lamp or other appliance into the outlet. If it doesn't operate, look for fuse trouble.
3. If the warning light is not burning it may need a new lamp.
4. If the trouble seems to be in the unit, call a service man.

ADVERTISING YOU CAN BELIEVE

HOW TO BUY A WASHER

By THE AMERICAN HOME LAUNDRY MANUFACTURERS ASSOCIATION

For most families, buying a washer is a large, longtime investment. It is an investment from which you will expect maximum returns in satisfaction, convenience and service. But the responsibility for these returns rests primarily in your hands.

KNOW YOUR NEEDS

All homemakers have certain wash-day needs in common. You need a set of conditions and instructions for obtaining washing results that will meet your personal standards of whiteness or color-brightness and cleanliness.

You may also have needs that are not shared by the average family. Perhaps, because of a very restrictive budget, you may need a very basic washer; one designed for good washing results, but without some of the convenience and appearance features of higher-priced models. Because of space limitations you may need the smallest, most compact model available—or even a combination washer-dryer.

If your family is large and your washdays are frequent your best solution is to buy a machine with a large capacity, or one with "commercial" characteristics of performance and durability.

Are you a combination career girl and homemaker? If so, you will probably want all the automaticity which can be had. The physically handicapped may have special needs such as simplified controls or a design that will allow operation from a wheelchair.

KNOW YOUR COSTS

More and more women are choosing automatic washers. They like the functional and convenience features that require a minimum of their time, attention, and effort, yet assure good washability for every item in the wash basket. The most advanced styling and the newest features will be found on the deluxe, higher-priced models. They are usually priced within a range of \$270 to \$325. In this bracket will be found the greatest number of functional, convenience, appearance, durability and economy features. These models will have the greatest range of control over wash and rinse temperatures, the rate of wash and spin speeds, cycles for natural fiber and synthetic fabrics, and assistance in selection of the wash program, such as a preset program and a visual guide for the setting. Conveniences may include a good work light, automatic clock timer, and dispensers for laundry aids. Porcelain, the most durable of finishes for washers, will be generously used in areas subjected

to wear. A preset water saver with infinite level and a suds conserver may contribute to economy of operation.

In the middle price group, approximately \$230 to \$260, the buyer will exercise the most choice. Here the degree of consumer choice will be the greatest, because some manufacturers will concentrate on appearance and functional features; others will offer the widest range of convenience and economy features and be less concerned with styling, appearance and functional features.

The third price group, with an approximate range of \$170 to \$220, is the basic washer. The buyer has chosen price as the most important feature of the washer. It will have the same sturdy, dependable washing action offered on the manufacturer's other models. In this group the styling will tend to be conservative and the features will be concentrated in the areas of convenience and economy. Some manual operation of this ma-

chine will enable you to obtain a higher degree of flexibility.

WHEN TO BUY

You should buy after getting all the information available. Carefully study the specification sheets and other informative materials available from manufacturers and distributors. Then compare quality, prices and features of different brands and models. Finally, consider all the advantages or disadvantages in relation to your own needs.

WHERE TO BUY

Only a reliable, authorized dealer has an interest in helping you to acquire an understanding of the operation and care necessary to keep your washer in good working condition. He will have trained service men who are prepared to give efficient service when necessary. He knows the terms of the warranty and will help you to understand its provisions. His personal interest in you and your problems will assure you of lasting satisfaction.

Washer Troubles And Their Remedies

(From Extension Bulletin 273, A. E. S., Wash. State Univ.)

Often a call to your appliance repair man can be avoided by a knowledge of a few simple remedies and repairs. Listed below are the most frequent stoppages and their remedies.

I. Motor Will Not Operate

1. *Cause:* Fuse blown, loose connection at wall outlet, or cord or plug needs repair.

Remedy: Check fuse box for blown fuse. Check cord and plug for possible repair or replacement. To prevent blowing a fuse, never start motor while cold; never start motor when agitator is at "ON" position; never start motor and agitator with machine loaded; never overload machine.

2. *Cause:* Motor troubles.

Remedy: Motor may simply need lubrication (if running hot) or cleaning. With most electrically driven washers, however, lifetime lubrication has been provided at the factory. Machine may be overloaded. Electrical circuit may be overloaded or inadequate. Call service man if trouble persists.

II. Agitator Does Not Operate Properly

1. *Cause:* Agitator not in place. On

some models, cap screw at top of agitator may be loose.

Remedy: Keep cap screw on top of agitator tight. Keep agitator pushed down in place. See that dirt has not collected underneath the agitator.

2. *Cause:* Agitator lever not turned completely to "ON" position.

Remedy: Move lever to "ON" position.

3. *Cause:* Drive coupling loose.

Remedy: Tighten set screws on drive coupling at motor end and agitator shaft end.

III. Excessive Noise, Vibration

1. *Cause:* Parts loose or worn.

Remedy: Tighten all bolts and screws. Keep all parts repaired.

2. *Cause:* Machine not level.

Remedy: Place thin wood strips under legs until level, or adjust legs (if adjustable) by screwing or unscrewing them until level.

3. *Cause:* Spinner vibrating due to uneven load.

Remedy: Stop machine and redistribute load.

**For Information
About the Amazing
GAS CLOTHES DRYER
Please see page 54**

A GARBAGE FREE ERA

By AUBREY MAGILL

A large manufacturer of disposers predicts that the 1960 industry sale of disposers will increase 11% over 1959, which had a record year; and further estimates that more than 50% of the new homes built will feature this appliance as standard equipment. If this forecast becomes a reality, the industry will sell more than 1 million disposers this year with a retail value of close to \$70,000,000.

Demand today for garbage disposers is growing faster than for virtually any other household appliance. At the present time, approximately 12% of the electrified homes in America are equipped with the unit.

Let it be noted that disposer sales have edged up steadily since the end of World War II, with the rate of public acceptance growing by the year. This trend will continue, until the appliance enjoys more than 10% market saturation. At that time, the growth pattern of other similar products indicates that its rate of consumer acceptance will be greatly accelerated.

The major reasons for the expected increase or rise is public recognition of just what the disposer can do, the expanding remodeling market, the mounting use of the appliance in new construction, coupled with the anticipated rise in building starts this year. The growing replacement market and the continuing upturn in the nation's economy are added factors which will contribute to this growing demand.

More and more builders and landlords are discovering that they must now meet this requisition of new home buyers and prospective tenants who expect such appliances to be installed in kitchens as standard equipment. The replacement market, too, is becoming an increasingly important outlet for the industry's merchandising plan. Many new and significant refinements have been made in the design of disposers since they began their climb toward natural saturation in 1947 and many of the earlier units are badly worn, necessitating replacement.

Increasing Popularity

The number of kitchens being remodeled annually is increasing rapidly, and few such face-liftings are being completed today without installation of disposers. The increasing popularity of the disposer is further accounted for by persons moving into their second home to meet expanding family needs. Surveys show that few of these families, who probably purchased their first homes during the building boom following World War II, would buy a new residence which

has not been equipped with a food waste disposer. Explanation for this is that these families either have become accustomed to these appliances in their former homes, or have missed them and now demand their convenience when stepping up into a better mode of living.

A great majority of these new homes being constructed are in suburban areas where septic tanks and cess pools are required. It is now an acknowledged fact that disposers can be safely and practically utilized with this type of sewage disposal.

Competitive Market

Another factor and a highly important one is that merchant builders have found in an increasingly competitive market that they must meet the requests of the consumer who expects such visual features as disposers in any home he looks at.

An ever increasing number of entire communities are requiring by code the installation of disposers in all new and remodeled kitchens. More than 35 major cities have passed legislation

on this requirement and the roster of more cities taking this stand is expected to be augmented as availability of dump land near their outskirts diminishes and costs of hauling, burning and filling continue to rise.

Behind this new look is a garbage-free community plan which is gaining momentum across the country as city after city moves to rid itself completely of the garbage problem with all its nasty components.

Health and convenience are two of the most important benefits obtained through installation of a sink-type food waste disposer. The fact that close to 50% of all the new homes built during 1960 will feature food waste disposers is probably the best possible evidence of this fact.

Our nation could well be on the threshold of a new era of public sanitation.

Meanwhile, with new cities undertaking garbage-free community plans at every turn, and consumer demands climbing higher and closer to the magic 10% saturation mark, the merchant builder has been quick to recognize the disposer, which was once simply an extra plus feature in custom homes, as an economical means of providing a vital selling feature for his new homes.

City Recommendations For

GARBAGE DISPOSAL INSTALLATION

By CITY DEPARTMENT of SANITATION

Although there are no regulations in the plumbing and sanitation codes of either the City of Seattle or King County which prohibit the installation and use of such units, the authorities do advise against it unless on a public sewer, or unless the following recommendations are carefully adhered to:

1. If the septic tank system has not been installed, we suggest they add 50% more tank capacity above minimum requirements to provide extra storage capacity.

2. Inspect the septic tank at least once a year to see if the accumulated sludge and scum layers have reached a quantity indicating the tank needs to be pumped to avoid carry-over of grease and sludge to the drainfield.

The reasons for their recommendations against disposal units in any home served by a septic tank system are as follows:

1. Regardless of type, all garbage grinders increase the organic load to be digested in the septic tank. This requires additional storage capacity, the necessity for which may not have been anticipated when the septic tank system was designed and installed.

2. Some of these machines have comminuters which pulverize the gar-

bage to such fine particles the garbage remains in suspension and passes through the septic tank into the drainfield. This would eventually result in a "sealing up" of the pores of the soil and seriously reduce the ability of the drainfield to dispose of septic tank effluent.

3. The possible detrimental effects of the additional grease introduced into a septic tank by use of a garbage grinder combined with the regular and prolonged use of detergents has not been investigated to our satisfaction. However, it would appear reasonable to assume a serious deterioration of the drainfield due to the carry-over of grease held in suspension by detergent action. (Before the widespread use of detergents, a sufficient volume of cold water was present in most tanks to effect prompt flotation of the entering greases.)

4. The majority of home owners having septic tank systems know little or nothing concerning their location, construction, operation, or maintenance. Under such circumstances, use of a garbage grinder without extra precautions might result in the complete deterioration of the drainfield before the home owner was aware anything was wrong.

Automatic Dishwasher, Sanitation & Convenience

By GEORGE McCracken

A phone call, the introduction, then —"I would like to have you come out and give me a quotation on installing an automatic dishwasher. Living by myself you may think it very silly, but I do have many reasons for wanting one. I have witnessed the change in the dinner atmosphere of my daughter's entire family since you "did" her kitchen. Formerly, when I was asked to her house, the dinner was a gay affair until nearing time for desert. Then as dirty dishes started stacking up, the gaiety ended, faces became long and I knew all were thinking the same thing—those darned dirty dishes! Now they compete to load the new machine and it's fun for all."

She went on for ten minutes, justifying to me, a kitchen installer, her need for an automatic dishwasher and I just sat there "lapping it up." Her coffee habit and her dislike of soiled cups in the sink and on drainboard. Her part-time work, partially at home, so that her time had a value, etc. Finally the statement that, though not financially affluent, she would not live forever hence could see no reason why she should deny herself the known

pleasure and conveniences of dish washer ownership.

Actually she did one of the greatest jobs of mustering up dishwasher attributes I have ever heard, even including her newly acquired knowledge that most modern dishwashers do not require the pre-scrubbing of dishes that she had seen some friends do before loading their machines.

She did omit completely the writer's personal view of the prime reason for dishwasher ownership, that of sanitation. It's a known fact that the dish-towel is the most unsanitary item in every household. A family physician stated to me recently that for a family of four a dishwasher would pay for itself in less than three years in doctor and drug bills, and lost work days, as the principal cause of such is colds and stomach upsets being passed from one member of the family to another through unsuspected lack of sanitation

in hand dishwashing methods. Housewife hypertension that can lead to a doctor's office can be relieved materially by "machining" the drudgery of soiled dishes. This opinion has been printed many times in medical journals.

A survey recently conducted by one of the country's leading universities showed that dishwasher owning housewives had 50 minutes per day (365 days per year) of additional time than their less fortunate sisters. This time may be devoted to their families, plain leisure or many other activities highly more desirable than working over a "hot sink." It's a godsend to working wives, as practical for a family of two with the wife working, as for a family of five.

A final point, and an important one, is that your new dishwasher will not really cost you a thing as your investment will be recovered in the sales price of your house when that time comes. Today's buyer will deduct a figure to cover such from an asking price if the dishwasher is not already installed. It is the number one item of a modern kitchen, so you might as well enjoy the many benefits yourself.

ADVICE TO HOUSEWIVES HOW TO KEEP THE DISHWASHER IN GOOD WORKING ORDER:

Feed him three square meals a day.

DISHWASHER TROUBLES?

See trouble chart next page.



Because it's the best . . .

Big bones . . . even corn husks . . . go quickest, quietest down a Waste King Universal Imperial Hush Food Waste Disposer — the finest that money can buy. It's the only brand of disposer with up to 5 times faster, super Liquefying Action and 85% quieter Magic Sound Barrier. Most advertised, most accepted, more trouble-free performance!

The new Waste King Universal Magic Dishwasher - Dryer pre-washes, washes, double-rinses and dries 12 place settings and better than any other dishwasher.

Call for the name of your nearest dealer

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AT 4-8400

The Dishwasher You've Been Waiting For



DISHWASHER TROUBLE CHART

(From Agriculture Extension Service Bulletin, W. S. U.)

<i>Problem</i>	<i>Cause</i>	<i>Remedy</i>
Machine doesn't fill right, or fills too slowly.	a. Filter screen on water inlet valve may be clogged. b. Low water pressure.	a. Clean the screen. b. Have time-fill control adjustment.
Water doesn't stay in tub.	Drain valve may leak.	See if food particles are holding it open.
Slow draining	Plumbing stoppage.	Call plumber.
Door leaks.	Gasket loose or worn.	Have service man replace gasket.
Machine doesn't start.	Current may not be reaching machine.	Check fuses. If power is satisfactory look for automatic cut-off. Reset. If it won't start call service man.
Spots, film or smears on dishes	a. Water too cool. b. Water too hard. c. Too much grease. d. Too much detergent. e. Improper loading.	a. Turn water heater up to at least 140°. b. Change detergents or install water softener. c. Rinse dishes before loading. Use proper detergent. d. Measure detergent. e. Load so water can hit all of dishes.
Utensils pitted or discolored.	Detergent dumped on utensils.	Put detergent in cup. It should be in solution when it touches utensils.
Particles of food on dishes.	a. Food hardened on dishes. b. Improper loading. c. Food redeposited.	a. Rinse dishes if washing is to be delayed. Clean screen. b. Load so water can hit every dish. c. Scrape dishes better. Clean screen.

FOR BETTER RESULTS WITH THE VACUUM

1. Vacuum rug about one foot per second, no faster.

2. Empty bag or change filter after each use.

3. Turn off the motor before you pull the plug. Never jerk the cord or pull against the plug.

Upright, revolving brush type cleaners require:

1. Revolving brush in contact with rug. Adjust or replace brush as it becomes worn.

2. Clean brushes. Remove hair, string, and thread from the brushes at regular intervals.

3. Belt tight enough to turn brush roll. Replace belt when it shows signs of wear.

4. Fan in perfect balance. A broken or bent fan means loss of suction and may cause damage to the motor. Pins, hairpins and metal objects may bend, crack or dent the fan.

Tank type cleaners require:

1. Tight connection in flexible and rigid tubings.

2. Tight seal between nozzle and surface to be cleaned.

3. Secondary filter replaced or cleaned as needed.

4. Use of correct tool for type and location of soil.

5. Running cleaner over rugs several times for good results.

More time for living with **KitchenAid**

AUTOMATIC DISHWASHERS



Dishwashing Action

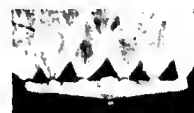
Proved where it really counts

...in The Home

For the finest, ask us to show you the dishwasher with the big blue lifetime wash arm and stainless steel filters which definitely eliminate need for prerinsing, and prevents food recirculation.

Sanitized flowing hot air
dries everything sparkling

CLEAN!



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**What Every
Family Should
Know About**

The Water Heater

By JOE BROWN

For a period of fifteen years I have had the opportunity of being a part of extensive tests in the construction and life of domestic water heaters, which have become a very important part of today's home. All of us living in the modern-day home have come to take automatic features as an every day occurrence and do not take time when we purchase our home to see that we have adequate hot water for the appliances that are in the home, or are contemplated for a later date.

Most people do not realize the importance of a water heater in today's home, in the fact that we open the hot water tap or put clothes in our laundry and as long as there is hot water we are satisfied. We do not take time to inspect our appliance and see that it is properly serviced to give us adequate length of life for the amount of investment which we have.

Let me first explain the design of your water heater so that during the time of purchase this might be brought to mind, as this is, I believe, a very important factor to the home owner at the present cost today of constructing a new home or remodeling your present home. Primarily the design of water heaters has not changed a great deal in the last fifteen years. However, there are many manufacturers that design water heaters that will save floor space in your home, which is very important in the over-all cost of the home. Estimating roughly the present home today will cost around \$14 per square foot and the average water heater will take up four square feet of floor space.

The electric input of water heaters has been changed considerably in order to furnish adequate hot water to handle present day electrical appliances which we all enjoy. This is another consideration that should be taken to see that the water heater is of adequate size or can produce the required amount of water. The simple way of figuring the amount of water you will receive from your water heater is to take the number of k.w. and multiply by four—for example if your water heater uses 4 k.w. then you multiply by 4 giving you 16 gallons of water, which you will receive per hour of operation. (1 k.w. equals 1000 watts)

The temperature of the water heater is set at approximately 150° when it leaves the factory and may be adjusted to your desired temperature and you will receive approximately 60% of the storage capacity of the heater before your temperature starts to fall or go to a lower temperature. An example would be if you had a 66-

gallon storage water heater you would receive approximately 40 gallons of 150° water and then the temperature would begin to fall. It is advisable to never operate a water heater over 150° as there is always the danger of scalding when a hot water tap is opened. The higher the temperature in the water heater will also shorten the life of a water heater, therefore, it is always advisable to buy a tank with adequate storage capacity.

One of the very important items to watch for in a water heater is the guarantee that is supplied with the water heater. One of the large failing points that the public has today is buying an appliance because it is cheaper than the next one. However, you can also go the other direction and pay more for an appliance than what is necessary to get the same guarantee. It is advisable to see who your manufacturer is and how long he has been in business, so that you will know you have some one that will stand behind the guarantee that is furnished with your hot water heater.

If at any time you are not satisfied with the explanation of your dealer, which is usually very dependable, take time to write the manufacturer and get his views as to the type of tank that you are purchasing. After all he is the man furnishing the appliance to you and backing up the guarantee, therefore, his advice is well worth listening to.

Next let's consider things we should know about our water heater when it

is being installed in our home or if it is already in the home which we are purchasing. 1. Be sure you know where the disconnecting fuses are so that in the event of trouble you may remove your fuses, thereby eliminating the danger of causing further damage to your tank. Also in the event of a failure of hot water you will be able to locate your fuse in the event the fuse has failed.

2. Know where the water shut-off valve is to your water heater in the event of a failure of the inner tank, this way you can eliminate further damage to your premises surrounding the water heater. The shut-off valve is located where the cold water enters the tank.

Contact the manufacturer of the water heater or the local power company to find out who a competent serviceman is to service your water heater in the event that you have trouble.

Many heaters are equipped with a magnesium anode which add years of life to your water heater. The anode is good for an undetermined number of years and therefore should be inspected periodically and be replaced when it has dissipated. If this is done, you are in a position to have years of life added to your water heater, and this is far cheaper than replacing the complete heater. To go through the above procedure will take approximately 15 minutes of the purchaser's time and can save him many hours of anxiety over the lack of hot water.



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MAJOR APPLIANCE SERVICE

By R. F. McINNES

Electrical appliances represent a considerable investment in every modern home, and keeping them in top condition at all times becomes a problem on occasion to every homeowner. Appliances are becoming progressively more complex as manufacturers attempt to make them more automatic

and labor-saving. Therefore, appliances need more frequent servicing and demand more training and skill of repairmen, who in turn must charge higher rates.

When a breakdown occurs, it is important to select a reputable service company to make the necessary repairs. Just as you would not trust a critically ill member of your family with anyone but a specialist, so should you not put your appliances into the hands of a "jack-of-all-trades." This does not mean that a handyman, or you yourself, could not make a simple repair—but why take a chance? Tinkering can often add greatly to the ultimate repair cost.

The best time to consider service is during the original purchase. Simply stated, make sure that in the case of emergency you can get reliable, quick service, preferably by factory-trained service personnel and by a factory-authorized service agency. All guarantees and warranties should be in writing. Specialists in their field are your best insurance against disappointment.

After the purchase, you have the responsibility of protecting your purchase. By all means adhere to the operational data furnished by the manufacturer. If an instruction booklet is not available, write the factory for one. You will usually find that a warranty is void if an appliance has been abused or misused or tampered with.

Keep a record of your date of purchase, and any other information pertaining to the function of your appliances. You may need it to back up any claim you may eventually have.

CHECK THESE FIRST

When a stoppage occurs in any of your appliances, first check the following points:

ALL APPLIANCES:

- Is it plugged in?
- Is any controlling wall switch turned on?
- Is the fuse in the house circuit fuse box all right?
- Is the wire badly frayed or separated?

Is the wall outlet functioning properly? (Test it by plugging in another appliance.)

LAUNDRY EQUIPMENT:

- Is the water turned on?
- Is the lint trap clean?
- Is the door closed tightly? Some models have safety switches that turn off when the door is opened.
- Is machine overloaded? Off balance? Remove or rearrange clothes. Reset control (or replace fuse) and try again.

Is washer blocked by suds? If so, advance dial manually letting machine fill and drain, but not spin, until suds are washed away.

RANGE:

Is automatic clock timer set at "Manual"? If not, surface unit or oven may not come on.

Are switch knobs well seated? Turn slightly and push in to make sure.

(Continued on next page)

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Freezers Dryers
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SEATTLE 9

SMALL APPLIANCE REPAIR

By JOHN McCARTHY

To facilitate the repair of small appliances, most factories have set up service stations in localities where sufficient activity warrants it. Some of these service stations are factory-sponsored and others are locally owned, but franchised to perform repairs under factory warranty. In a city the size of Seattle nearly all reputable manufacturers are represented by a local servicing organization.

When in need of service the normal procedure is for the customer to take the appliance to the service station. If the residence is a great distance from the service station, return will be made by prepaid transportation if a suitable shipping container is furnished with the appliance when it is delivered for repair. Customers living in Seattle should make arrangements for the pickup of the appliance when it is repaired.

When buying an appliance, consideration should be given to the service policy. Find out:

1. How readily available is service?
2. Life expectancy and service implications?

Your best assurance of dollar value and a minimum of service needs is to buy a quality appliance from a reputable dealer who has a record of fair dealing with his customers.

At the time of purchase, terms and conditions of the warranty should be understood and complied with to insure future satisfaction. Generally, a warranty is offered for one year, but the term can vary from 3 months to 5 years. Therefore, it is important to understand the conditions prescribed.

Normally, warranty includes any repair necessary to place the item in operating condition *consistent with its age and appearance* when presented for repair. As a rule, it does not include replacement for a new item, or repair for a condition caused by abuse or neglect. Plastic handles, knobs, cord sets and glass are not normally covered under warranty because usually their failure is due to breakage or from conditions other than defect.

Exceptions are sometimes made, but they must be justified to the satisfaction of the factory representative.

Most appliances include an instruction pamphlet, warranty card and list of repair stations. The pamphlet should be studied and its contents applied to secure best results. Also, it is very important to fill in and mail the warranty card as specified. Finally, a written record should be kept, noting the date and place of purchase so that this information may be furnished when repair becomes necessary.

Prior to taking any appliance to a service station several things should be done. First, check to determine the exact nature of the difficulty. Second, thoroughly clean the appliance. And third, gather all integral parts, especially the electrical cord, to accompany the appliance to the service company. The cord set that is not brought in is often the only cause of failure.

And there is one big DON'T. Don't attempt home repair, particularly when the appliance is covered by the warranty. In most cases, taking apart an appliance voids its warranty. Also, it often calls for additional work by the service man, and sometimes parts are lost or damaged in the course of inspection.

When parts are required it is important to ascertain the model and serial numbers and any other information which might be helpful in identifying the part required. A sample is often helpful to insure getting the correct part. Credit is not normally extended due to the small unit sales and the infrequent need for it. Therefore, cash is expected either upon order or at the time of pick-up.

If in doubt about a parts outlet, you may secure this information from the dealer who sold you the appliance. Many dealers make a practice of stocking the more common parts, and others make such parts available to their customers by direct purchase from a parts distributor as the need arises.

When an appliance is out of warranty service is performed on a charge basis. It is governed by the amount of time required to repair the item and

the parts necessary to install. To provide satisfaction it is common practice to repair a small appliance to the extent of a reasonable life expectancy. It is not always possible to determine if some other parts might fail, but an honest effort is made to place the appliance in first-class operating condition according to the wishes of the owner. Normally, a 90-day warranty period is provided after repairs are made.

Typical charges as reported by the National Appliance Service Association are:

Automatic percolators	\$3.95
Floor polishers	6.00
Frying pans	3.95
Steam irons	3.50
Toasters	4.00

Parts required are charged for separately, and normally, there is a minimum labor charge of \$1.00.

When estimates are requested, it is usually necessary to dismantle the appliance in order to be accurate. Some service firms charge for an estimate if there is no service work resulting from it. Other firms offer free estimates. In all cases, however, the customer should be prepared to pay cheerfully for any time involved in disassembly or re-assembly.

MAJOR APPLIANCE SERVICE

(Continued)

VACUUM CLEANER:

Is the drive belt properly attached?
Is mechanism free from large objects?

CALL YOUR SERVICEMAN

If none of the above check points solve your problem, chances are you need a serviceman. When you call him, be prepared to give the name and model number of your appliance, and describe what the trouble is.

You will naturally wonder how much you should expect to pay. No highly trained technician should be expected to offer his time and skill for "bargain" prices. And a good technician is just as interested in your welfare as you are. Be wary of the very high or the very low charges. And remember that you are entitled to an itemized statement. You may also ask to see replaced parts.

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Lighting



LIGHT FOR BETTER LIVING

By Thomas O. Wimmer

Nearly a century after the invention of the electric light, the interiors of America's homes have still not emerged from the shadows, in spite of a strong trend toward better lighting in recent years. It is estimated that 75 percent of our homes are inadequately lighted.

Electric light is needed during most of the hours the family lives in the home. In 1961, this lighting is generally only a few foot candles above that provided the cave man. This inadequate lighting involves many new homes as well as old ones. The few foot candles of light in the average home contrasts sharply with the lighting of 50, 100 and 200 foot candles provided in offices, schools, stores and factories.

The comparative dreariness and danger which results from bad home lighting represents a challenge to industry, educators, commentators, writers and others responsible for getting information to Americans. The challenge has been taken up by the

entire industry under the slogan, Light for Living.

Basically, "inadequately lighted" means not enough fixtures and portable lamps to meet four important requirements.

1. Provide balanced general lighting to eliminate glare, and to bring to life the colors, designs and textures of furnishings.
2. Provide low, medium and high levels of lighting to meet the emotional needs of different moods.
3. Give lighting for specific seeing tasks, such as reading, sewing, housekeeping work, shaving, make-up, and recreation.
4. Supply decorative accent lighting to add sparkle and enhance the colors and designs of the decorating plan.

Skilled home-lighting specialists should be consulted, since professional advice is of great importance in meeting these requirements. Free counseling is available at lighting fixture distributors' showrooms.

HOW TO CHOOSE AN ELECTRICAL CONTRACTOR

As the importance and volume of electrical contracting in today's homes grows, so your need for the services of a competent, dependable electrical contractor becomes more important. In selecting an electrical contractor for your work the following characteristics of a qualified electrical contractor can be used as a guide:

1. Skilled Management
2. Technical Know How
3. Experience Background
4. Financial Stability
5. Specialization

To determine if electrical contractors convenient to your location are qualified to do your work, you can call the credit office of any major electrical supplier. In addition, the local utility companies maintain lists of qualified electrical contractors from which proper selection may be made.

PROPER CARE OF YOUR LAMP SHADES

By Harvey Hansen

To wash a shade, wet a soft cloth and apply a mild soap or detergent to the cloth. Rub gently over soiled areas. Rinse the cloth, then wipe the entire shade gently, wiping off the soap.

Dry in a warm place, turning the shade several times to avoid water marks.

To clean the lining, follow the same instructions, making certain to wet the entire lining to avoid water rings.

In decorating a large room use tall lamps and shades for proper balance. Small rooms require small lamps.

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If you are planning to build or purchase a new home, note carefully the electric system, for nothing will out-date a house quicker than an inadequate electric plan.

HOUSEPOWER starts with your electric "main." The wires which connect your house from the power company pole, the panel containing the main fuses, and switch or main circuit breakers all comprise the "main entrance" for electricity into your home. This is called the "Electric Service Entrance." All present and future use of electricity in your home is limited by the size of the electric service entrance.

A common mistake made by many



Wiring



HOW'S YOUR HOUSEPOWER?

By JOE DeLEON, Seattle City Light

people in purchasing a new house or building is to assume that the Electric Service Entrance is "adequate," just because it is "3-Wire" (230/240 volt with 110/115 also available). It is well to remember that the important factor is not the three wires but the size of the three wires and the size of the Electric Service Panel (fuse box or circuit breaker). Since you pay only for the current you use, in the long run, it pays you to install a big enough entrance system to allow for future expansion. Plan at least ten years ahead.

How big should the Service Entrance be? According to modern standards the Service Entrance should be large enough to provide 4500 watts of lighting and plug-in appliances per 1000 square feet. (An additional 2400 watt appliance circuit for new high speed rotisseries and fryers is also recommended, or at least to put the automatic washer on a separate circuit). In addition the following permanently connected major appliances are usually installed before occupancy. If not, they will be added within a short time.

Automatic Washer	750 watts
Built-in Bath Heater	1000 watts
Dishwasher-Disposal	1500 watts
Electric Clothes Dryer	4500 watts
Electric Range	8000 watts
(new built-ins to 16,000)	
Electric Water Heater	4000 watts
Home Freezer	340 watts
Mechanism for	
Fuel-Fired Furnace	750 watts
Lighting and	
Plug-in Appliances	4500 watts
(per 1000 sq. ft. added	
2400 watts recommended)	
TOTAL	25,290 watts

It is plain to see that the 100 amp Electric Service Entrance panel that provides 24,000 watts capacity is the minimum for today's modern home. If electric heat is to be used in the place of the fuel-fired furnace, or if the home owner will have a large shop powered with wood-working equipment, or a greenhouse electrically heated, the service requirements would be such as

to make it necessary to use a 200 amp Electric Service Entrance.

After entering through the Electric Service Panel electricity is carried as needed by smaller wires. These wires are called "branch circuits." They are our homes' "electric highways." Just as our streets and highways must be large to accommodate many fast cars, so must the electric circuits be large to take care of the high-powered appliances we now use. We place in the circuit ahead of the appliance a "traffic cop," the fuse. That limits the amount of traffic that may flow. When you try to carry too much traffic over the circuit, the fuse blows. In some cases, if the wires are too small, you cause "traffic jams" and appliances starve because of the "voltage drop." This could be likened to slow moving cars on an overcrowded street. When wires are too small or too long, the heating of appliances takes twice as long to do the work. Continued operation of such things as a refrigerator motor on low voltage or "starvation-diet" electricity will cause the motor to burn out.

Another important part of a good electrical system is the number and placement of convenience outlets. Convenience outlets in all rooms except the Kitchen, Bath and Laundry rooms should be located near the ends of wall space, approximately 12 inches off the floor. Convenience outlets should be placed so that no point along the floor of any wall with usable wall space is more than six feet from an outlet in that space. Every wall that can be used for furniture should have at least one outlet and, in most cases, two. Weather-proof outlets should be included in a good plan, preferably near the front entrance and in the rear near the patio, 18 inches above grade.

Every Bath should have at least one outlet near the mirror, three to five feet off the floor.

Convenience outlets in Kitchen and Laundry areas should include one out-

let for the refrigerator plus one outlet for each four linear feet of work space. Place work space outlets approximately 44 inches off the floor. There should be special purpose outlets for a clock and fan and, of course, an outlet for the electric range. A food freezer outlet on a separate circuit is recommended, as well as a separate outlet and circuit for the automatic washer and iron or mangle. An outlet for the electric dryer, a maximum distance off the floor of three feet, is also necessary.

Another important part of electric planning is for lighting. Be sure to include a survey of the location and amount of lighting. A few important things to check are:

1. Lighting for safety; at front and rear entrances, at head and foot of all stairways, night lights in hallways and out-of-door paths, walks and steps. Lights out of doors also for protection against vandals and prowlers.

2. Light for all household tasks; make-up, shaving, in the basement, attic, at work bench, good light for kitchen cooking, and at the sink, in the laundry area for washing, ironing and mending.

3. Accent lighting for beauty; for planters, the fireplace, cove lighting for wall, pictures and drapes, in bookcases, room dividers and in the garden out of doors.

Don't forget Switch Control...

Help prevent accidents and add to the convenience of the home by proper control of all lights. Can you control the garage lights from the inside of the house? In rooms having two or more entries, can you turn on the lights from both locations? Can you turn on lights at the head and foot of all stairs and at the ends of the hallways? Do you cross a room, any room, before you reach a light switch? Good switching calls for "Multiple Switch Control." Or, simply stated, "control of one light source or combination of light sources from two or more locations."

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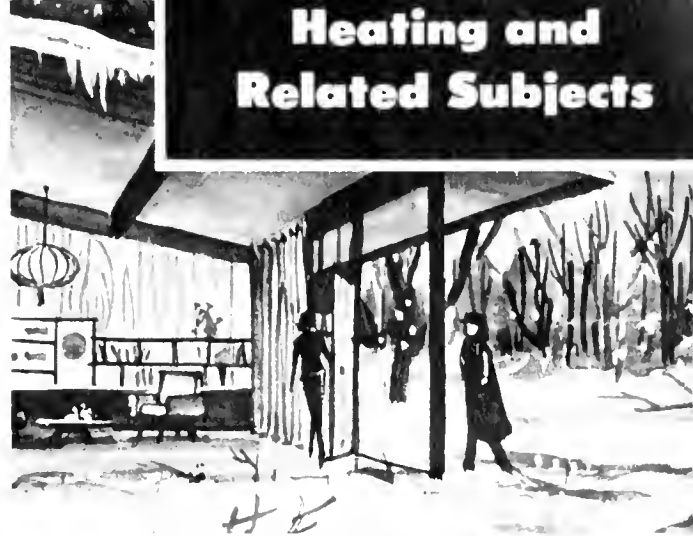
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CONSIDER A HEATING SYSTEM

By JOE BROWN

Today there is an increasing variety of ways offered in heating a home, therefore, the purchaser should take time in considering the advantages of each. If the home is not heated adequately or properly then it will mean that there will be drafts, which are very uncomfortable during the leisure hours of the evening or it will be too hot to be comfortable. Of course the hotter the home is kept the more heat is wasted.

You should never purchase a heating system without first questioning at least three types of heat or three different people on the same type of heating to get their views. For instance, one engineer may feel that he can heat your home more adequately but does not take into consideration the temperature in all the rooms, therefore, you may be comfortable in one room and uncomfortable in another. The next man will take into consideration all rooms in your home and it will look like he might be overcharging you for your heating system, but he is only thinking about the comfort and advantages of his heating system over his competitor. For example, if we did not heat all of the rooms adequately then the rooms with a small amount of heat would draw the heat away from the adequately heated room, which may cause you to sit in a draft, or cause all of your rooms to be out of balance.

As any other item bought for the home you can pay too much for a heating system but more often you will pay too little for a heating system. If this is the case, it will mean that at a later date you will have to correct the heating system, which can be far more expensive than if you had spent an additional few dollars in the beginning.

An adequate and well designed heating plant in a home is one of the best assets for future valuation of your home. Very few people will stop to realize that today we are purchasing our homes on a long-term mortgage

contract of 20 to 30 years and therefore the small amount of difference that we would have to pay in monthly terms we can well afford an adequate heating system in our home.

A very important item is the cost of operation of the heating plant and a lot of this will be determined as to the location of our home. There are three basic types of heat—electricity, oil and gas. If we are in an area where the rate of electricity is exceedingly high then it would be advisable to contact the local power company and see if there is any chance of the heating rates being lowered in future years before deciding on electric heat. The same procedure should be used in determining the value of using oil for heating as in certain areas the price of oil is considerably higher than electricity or gas.

Another important feature to check is service. Some types of heating are considered as service-free, whereas other types must be serviced three or four times a year so that they might work to their highest efficiency. It is

important to talk to a service man so that you might determine as to what your cost of the operation would be for the year.

Life expectancy or depreciation of the heat plant should be taken into consideration as certain types of heating plants will depreciate over a period of years and will have to be replaced where others can be expected to last an indefinite period of time. Therefore, the depreciation cost should be taken into consideration when considering the over-all operation cost of your unit.

There are three basic types of heating—hot water, electric and hot air. All of these offer a very large variation in the type of installation and it is well to consider all of them. A lot depends on the style of home that they are to be used in. It may seem that this will take a lot of time to consider the type of heating you are going to put into your home, but we should also consider that we spend possibly 75% of our lives in our homes. We should have a right to comfort.

Save 25% or More on Heating Costs

1. Attic insulation, usually 4 inches deep, prevents heat escape and reduces drafts. Wall and floor insulation 2 inches thick is recommended for maximum protection. Insulation also aids summertime comfort.

2. Storm windows and doors and double windows provide an insulating layer of dead air space.

3. Weather strip and caulk windows and doors.

4. Temperature controls should remain fixed at a comfortable level. Setting thermostat high does not make the furnace heat faster.

5. Lower thermostat temporarily while airing house.

6. At night lower thermostat by at least ten degrees. However, for radiant slab or electric cable heating systems, use a maximum reduction

of 4 degrees.

7. If lower temperature is desired in some rooms, such as bedrooms at night, close off the room from the rest of the house. If cold air leaks under the door, throw a small rug against it.

8. If garage is part of the house, keep garage doors closed.

9. Close fireplace damper in between fires.

10. Close off air vents under the house during winter to keep floors from chilling.

11. Keep drapes, rugs, furniture, dust and other insulating objects away from radiators or convectors. Air flow should be unobstructed.

12. Keep your heating system in good working order and free from dust and dirt. Rely on the suggestions of the manufacturer.

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NATURAL GAS HEAT

By
WASHINGTON NATURAL
GAS COMPANY

The newest fuel to the Pacific Northwest is NATURAL GAS. To homemakers as yet unfamiliar with the nature of this new fuel, it may be said that natural gas is superbly clean, fast, safe and economical. It requires no storage bins or tanks. It is automatic and trouble-free. What little maintenance service is required is provided free by the gas company. Because it arrives by underground pipe, its delivery is uninterrupted, unaffected by icy roads or winter storms. It burns completely—so soot-free that the chimneys of natural-gas-heated homes need never be cleaned!

Tremendous Acceptance

For these reasons, the acceptance of natural gas has been tremendous in the 2½ years since its arrival to the Pacific Northwest. Thousands of homes, commercial establishments and industrial plants are now using it. Within the past year, in the Puget Sound area alone, 95% of the new-home builders have specified the installation of natural gas heat in areas where the fuel is accessible. (In some sections, pipelines have not yet been laid—although this work is proceeding as rapidly as possible.)

It would be difficult to choose the most important *single* reason for the popularity of natural gas. To the housewife, its cleanliness is a prime factor. Other solid and liquid fuels must turn to a gas before they can produce heat. A residue of ashes, soot and other impurities remains. With natural gas, of course, this is not the case. It burns completely, leaving no film or dirt to mar walls and ceilings, draperies and furnishings. Natural-gas-heated homes stay cleaner longer. Professional cleaning (of draperies, for instance) and redecorating bills are less frequent. The homemaker's job is easier.

Economy Factor

To her husband, the economy of natural gas may be of first importance. This is especially true in the "all-gas" home, where a particularly low rate applies. Cost-comparison testimonials are on hand at gas companies, which attest to the economy of natural gas as compared with the fuel each used before natural gas became available in the Pacific Northwest.

Natural gas is a safe fuel. National Fire Association statistics show that natural gas rates the safest of all fuels.

House plants thrive on natural gas

heat. Because of its purity, cleanliness and infinite controllability, a great many Pacific Northwest nurseries have already made the change to natural gas. The famous Glenrose greenhouses of Spokane, whose specialty is the propagation and growing of rare orchids, and Averill's Nursery at Snohomish, Washington, whose choice chrysanthemums and other plants are widely sought by Northwest gardeners, are among leading nurseries who prefer natural gas.

Other Uses

How else is natural gas used—and why is it preferred? For cooking . . . only gas provides 1001 heat speeds; only with gas can maximum heat be reached instantly; in fact, only with gas can *any* precise degree of heat be attained immediately. For water heating . . . 3 times faster. Because of this remarkable "recovery" factor, a smaller hot water tank will suffice. This means a substantial saving of money to the home-owner or builder who must have a hot water tank installed.

For heating the water of swimming pools—both commercial and home

pools—natural gas is proving to be a leading choice.

Refrigeration, ice-making and air conditioning are further uses of natural gas.

Gas company showrooms also feature fine new gas equipment of all kinds, and the public is always welcome to come in, look around, and have questions answered.

To the homeowner contemplating the installation of natural gas for heat, cooking, or any other purpose, the first question which must be answered is whether the fuel is available on that street or in that neighborhood. A phone call or a postcard inquiry to the nearest gas company will bring the answer. Next, how much will it cost? Again, the gas company will be able, following a representative's visit to the home, to give a specific estimate. Sixty feet of fuel line (from the street pipeline to the house) will be installed free of charge. Your gas company now has a budget billing system whereby the annual fuel payment may be made in equal monthly installments. Also, in some cases, gas equipment may be paid for along with the monthly gas bill.

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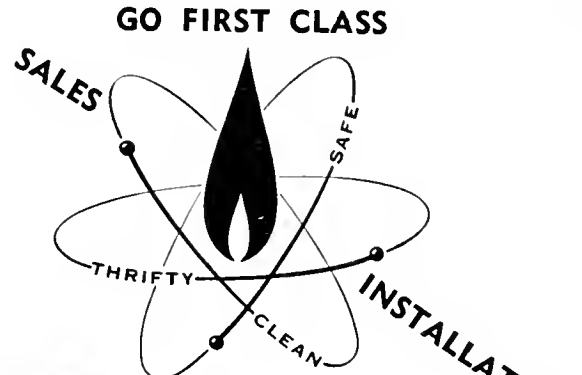
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Questions & Answers About Gas Conversion

- Q: I have a forced air oil furnace. Can it be converted easily to natural gas?
- A: Yes. Almost any furnace can be successfully converted to burn natural gas.
- Q: Isn't a conversion rather complicated?
- A: On the contrary, most conversions can be completed in one day, and involve chiefly the addition of a gas conversion burner.
- Q: Is a conversion expensive?
- A: Conversion costs vary, but as a rule, the cost is "written off" within several years through savings in fuel bills. Of course, the added advantages of cleanliness, safety, quietness and efficiency begin paying dividends immediately.
- Q: How can I be sure my present heating system may be successfully converted?
- A: Good conversions with high efficiencies are practicable provided the following conditions apply to the original heating system:
1. The furnace or boiler is basically in good condition — with adequate ducts and registers or pipes and radiators.
 2. There is an adequate combustion chamber and enough "secondary" heating surface.
 3. The furnace has the capacity to match the heating requirements of the home.
- Q: How can I get complete details about converting my furnace?
- A: Ask your local Gas Company to send a trained technician to your home to check your present heating system to determine whether or not natural gas conversion is feasible for your home. There is no obligation.
- Q: How can I qualify for the "all-gas rate"?
- A: Simply by heating your home with natural gas.
- Q: What types of gas heating systems would I have to choose from?
- A: The forced warm air system is most popular in this area because of its adaptability to any home and its inexpensive installation. For a smaller home with a basement you may prefer the gravity warm air system. Also available for smaller homes are wall heaters (with and without chimney) and circulating heaters. You may prefer a hydronic system which employs a boiler to heat water or steam. The steam is then conveyed through pipes to heat-emitting units, such as radiators or convectors. Whatever your heating need, gas will do the job.

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ELECTRIC HEAT

By
VIRGIL NAPIER

Home heating by electricity has increased rapidly in recent years. For many years electricity has been used chiefly for supplemental or temporary auxiliary heating of bathrooms, spare bedrooms, added rooms and hard-to-heat rooms.

Now since some other fuels have practically doubled in cost electricity is rapidly becoming a popular means of complete home heating. Actually, there is very little difference in electrical heating costs over other methods and when all factors are considered electric heating is not a premium heating method and is within the reach of everyone in the modest income bracket. Cost is no longer the barrier it once was. The number of homes now heated by electricity has doubled since 1956—and is expected to quadruple in the not-too-distant future.

Many landlords and apartment and motel operators have installed electric heating because they have found operating and maintenance costs are at a minimum with properly applied electric heat.

Since practical considerations influence the selection of any heating system it is little wonder why the application of electric home heating is growing in popularity. It offers:

1. Convenience.
2. Flexibility.
3. Zone control is available at very little cost.
4. No space is required for fuel storage.
5. No open flames.
6. Clean heat.
7. Life of the equipment is normally much longer.

Many Uses

During these past few years of rapid growth of electric heating there have been many new methods of heating electrically. These methods are of seven basic types: central warm air furnaces—central hot water systems—off-peak systems—heat pumps—cable heating—electric floor furnaces—and electric unit heating systems.

Of all the methods employed for heating homes electrically the following are most practical:

The central warm air system employs a central furnace with the use of air ducts to each room with adequate return air supply.

The central hot water system employs an electric hot water boiler with pipes and some form of radiator filled with either steam or hot water for delivering the heat from an electric boiler to the location to be heated.

"Off Peak Heaters" include all storage type heaters which require no electrical input during certain times of the day. They are, of necessity, a

variation of the first two methods because they require either ducts or pipes to deliver heat from the origin of generation or storage to the point required, however, the characteristics of off-peak heating warrant a separate classification.

The "heat pump" is interesting because both heating and true refrigeration cooling can be provided by the same equipment within minutes with no mechanical changes to the equipment. As with the three methods just discussed ducts or pipes are needed for the heat distribution which are installed in much the same manner as a conventional warm air furnace system except the ducts are about one-third larger in capacity and, as is often the case, a few extra ducts are desirable. Of all the electric heating systems the heat pump is by far the most expensive installation, costing approximately \$3,000.00. This naturally confines this system to higher priced homes, but in recent years the popularity of the heat pump has been steadily increasing. The heat pump is very much less expensive to operate than conventional fuel and approximately one-third the cost of conventional electric heating.

There are myriad advantages to the heat pump which should not be over-

looked. Since the heat pump takes the heat from the outside air during the heating season and circulates it into the home to maintain 75 degree comfort within the home, it must be realized that springtime air is circulated throughout—a health aid to its occupants. All the dust in the air is precipitated electrically, thus greatly reducing maintenance costs, redecorating costs and depreciation of furnishings, etc. Pollens, air pollution, bacteria and paroxysms are eliminated, thus eliminating irritants that harass the asthma, sinus and hay fever sufferer. Colds and respiratory diseases are practically banished as dust is eliminated. Other bacteria, too, are minimized because their only means of locomotion—dust particles—is eliminated.

Electric cable heating in most areas of the United States is by far the most widely used in new construction because of the low first cost, its overall efficiency and the fact that it is hidden in the ceiling out of the way, either imbedded in the plaster or between layers of plasterboard. Electric cable is made of special heating wire coated by a special plastic covering. The overall size of the wire is ap-

(Continued on next page)

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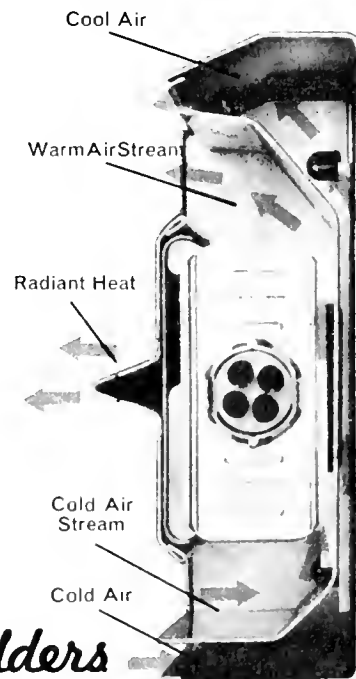
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BASEBOARD ELECTRIC HEAT



Electric Heat...(Continued)

proximately $\frac{1}{8}$ inch in diameter. The cable is made up in various spool lengths of wattages ranging from 300 watts to 4600 watts in both 110 and 220 volts. The cable is applied to the ceiling. Since electric cable is a reflection type of radiant heating, insulation is of extreme importance. Electric cable properly applied is one of the very best types of electric heat. As the building progresses the building must be properly prepared for cable heat. First of all to the ceiling rafters, rock lath with an aluminum foil back is applied to the joists. Then the electric cable is applied starting six inches from the outside walls and weaving the cable back and forth not closer than $1\frac{1}{2}$ inches apart over the entire ceiling. Then a thin coat of plaster is applied to the rock lath just barely the thickness of the wire diameter. Then plaster about $\frac{1}{2}$ inch thick or $\frac{1}{2}$ -inch plasterboard is installed to this base application. Manufacturers of cable will supply books on the proper application of cable. These specifications must be closely adhered to. Aluminum foil must be installed in ceiling, walls and between sub-floor and floor. The ceiling is the proper place to install electric heating cable. Electric cable should not be installed in the walls. The floor is a poor place to install electric cable. Formerly many jobs

were installed in the floors but it was soon found not to be practicable. In order to heat a room properly and economically, it was found the plaster temperature must be carried at approximately 115 degrees. The highest that floor temperatures can be maintained is at 84 degrees and this is not hot enough to heat the home properly. There are usually obstructions on the floor that retard heating, such as rugs, rug pads, davenport, furniture, pianos, etc., that stop the heat rays. Whereas the ceiling is an unobstructed complete heating panel. Thus, it is like putting the sun in your ceiling. At first thought it seems that electric heating radiation installed in the ceiling would not be proper but when it is considered that the finest heating system in the world is the sun which heats from above and that on days when the sun is radiating its heat earthward the earth's surface, sidewalks or sand on the beach is warmer than the air above it. Then one begins to realize that here is an ideal way to heat, for it more closely resembles sun-like warmth than any other type of heating. The interior of the home becomes like a warm spring day with extremely even warmth throughout. Each room or area of the home has its own individual thermostat and each zone is maintained at the desired temperature. Because

there are no moving parts, this system will never deteriorate, cause any service costs, and will outlive the house itself.

It has often been said erroneously that heat rises. This is untrue. It is warm air that rises—not heat itself. If this were true, the further we flew away from the 'earth in a plane the hotter it would become. Just the opposite is true.

It is my personal prediction that electric cable will become a great factor in new home building in the near future.

Electric floor furnaces, include those devices which recess beneath the floor with the top grille in the floor between the floor joists. Installation cost of the floor furnace is by far the least expensive. The electric floor furnace is a practical installation for low priced smaller homes because a form of simple heating can be obtained at this low first cost. However, they tend only to heat the area locally just as a conventional heater would.

Electric baseboard heating has grown immeasurably in the past few years. Since this is a radiant and convection type of heating, insulation is important. Aluminum foil should be installed in the attic space, in walls and under crawl space of the floor. The best place to install electric baseboard heat is on or near outside walls, thus surrounding the entire home by electric radiant heat.

I am often asked how much does it cost to operate electric heat... By averaging several thousand homes, and research on my own, the following will give a very close estimate. But, of course, circumstances will vary from one home to another due to conditions, construction, etc.

Comparative Costs

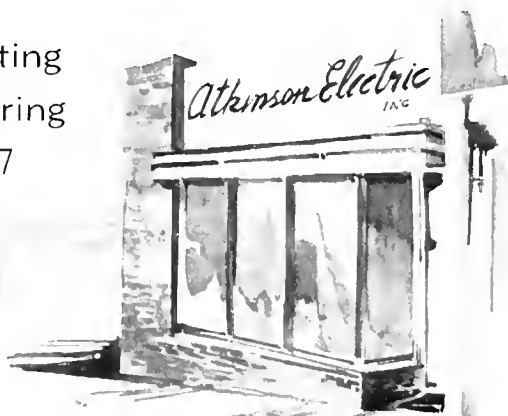
The cost of electric heat will run approximately 18.8 cents per square foot per year in old construction and $16\frac{1}{2}$ cents in new construction, insulated and prepared for electric heat. Oil heat will cost about 15 cents per square foot per year. Coal about 16 cents, natural gas $11\frac{1}{2}$ cents per square foot. I have computed these figures from my 29 years' experience in the heating business and have found them to be very accurate and a fair average. It has been found that 20 per cent of the annual heating cost is consumed in January. If the heating cost for month of January is multiplied by five it will approximately give the total yearly consumption. These are all based on costs in the Northwest.

Some electric companies now give a special heating rate to churches, restaurants and swimming pools. I predict that electric heating will become a great factor for swimming pool heating. Investigation will show that electric swimming pool heating is very much in line with other fuels. The heating of churches, schools and restaurants are about the same as oil.

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ELECTRIC BASEBOARD HEAT

By HOWARD GLAZER

In the Pacific Northwest, approximately 90% of all electric heat installed is baseboard. There are a number of different ways of producing heat with the baseboard method. The most widely used, however, is a sealed tube of steel or aluminum with a core of fire clay ceramic. Passing through this core, is a high-grade nicrome element.

Baseboard heaters are available in sizes from 4½" high to 16" high, 2' long to 12' long. Also 140 watts a lineal foot, in the low density method of distribution, to 400 watts a lineal foot in the high density method. The size in height, length, and density depends on the room size and availability of cold wall space. The living room demands the most critical calculation and equipment placement. As a rule, the greater the lineal footage you spread your heat out, the more even and the more accurate control you can achieve. In bedrooms, because of space taken up by large objects, lack of free wall space and due to the lesser volume of air to heat, and the fact that the temperature differential is not as crucial as other rooms, higher density baseboards may

be used with complete satisfaction. It is very possible and feasible to use three or four different styles and densities — high, low, and medium — depending on the requirements of various rooms in the house.

A sealed element, that is one in which the resistance element itself is not exposed to the free air, but is sealed inside of a steel or aluminum casing, requiring no servicing or adjustment since the element is sealed from the air and not subject to oxidation. The life expectancy is projected by most electric heat specialists at between 40 and 60 years of trouble-free performance.

Furniture, which plays a very important role in the placement of heating equipment, may be placed in front of most sealed baseboard units. Proper design should give years of trouble-free, dirt-free, noise-free operation.

This writer, having worked in all phases of electrical heating for several years, has found the sealed baseboard application to have the greatest number of advantages and the least amount of disadvantages of any form of electric heating. Baseboard can truly be called a "miracle of flameless heat."

ELECTRIC HEAT CONTROLS

By HOWARD GLAZER

Thermostats are the brains of any heating system, especially with electric heat. One or more may be involved, depending on the degree of zone control desired.

The three major types of electric heat thermostats you are apt to consider are:

1. Baseboard unit-mounted — the least expensive. 2. Wall-mounted line voltage — the most widely used, and 3. Low voltage wall-mounted.

Baseboard unit-mounted — Used when economy is a key factor. Disadvantages: too low to floor to read properly; subject to damage by furniture, mops, toys, etc.; chances of being hidden behind furniture.

Wall-mounted line voltage — Advantages: Fairly low price and ease of seeing and adjusting. Disadvantages: In mass producing, aging (lengthy testing and re-adjustment) is virtually impossible. The two types are 1) gas-filled capillary tube, and 2) bi-metal sensing plate. The former is more popular, but subject to mechanical failure and sometimes temperature differential of 3 to 5 degrees.

Low-voltage wall-mounted — Rapidly becoming more popular because of disadvantages of other types. Consists of a highly sensitive thermostat connected through low voltage (24V or less) to a precision built relay. Advantages: accuracy to within ½ to 1/10th of a degree variance; no thermostat "droop"; cooler and cleaner operating heaters; savings in operating costs; more years of trouble-free performance. Disadvantage: higher installation costs (but more economical ultimately).



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OIL HEAT

By
OIL HEAT INSTITUTE
of WASHINGTON

Comfort is one of those intangibles which normally cannot be defined as an absolute. About all we know about it is that when we say we are "comfortable" we are expressing some form of pleasure, satisfaction or happiness, and that to be "comfortable" is a state that is much desired. The priority that should be placed upon providing for "comfort" in a home is best illustrated by the fact that some 75 per cent of a family's life together is spent in that home.

Decisions about home heating should be based on a desire to provide this comfort, as should decisions about home construction, landscaping, furnishing and everything else. Can you feel "comfortable" about the safety of your heating system? About its dependability? About its contribution to the value of your home? About its cost of maintenance of operation? Above all, can you be "comfortable" in the knowledge that your heating system is at your command to provide warmth when and where you want it, and in quantity which only you determine?

Safety Factors

Modern oil heat provides this comfort and offers a "plus value" factor in terms of safety, acceptability and dependability, and healthfulness for you and your family.

Modern furnace oil is refined with your safety in mind. Even an open flame will be extinguished if plunged into a pail of heating oil. Burning takes place only when the oil is properly atomized and mechanically ignited, as in the enclosed combustion chamber of an oil heating plant.

Overwhelming preference for oil heat in our area (some 87 per cent of all families, according to the most recent Seattle Times newspaper survey) makes your home worth more in terms of resale value, should you ever decide to sell. Heating oil storage right on your property is your private safeguard against unusual weather conditions. The independent heating oil dealer whom you select, together with nearby oil refineries and terminals, is your assurance of a never-failing supply.

A modern oil heat installation is your servant to provide safe, clean, economical, healthy living and gives added value to your home and security to your family.

A modern oil heat installation is more than just the fuel itself. It considers the type of heating system, the basic oil-burning equipment and, of course, the grade of heating oil most appropriate. It also includes the in-

dependent heating oil businessman whose very livelihood depends on your satisfaction and the satisfaction of others who, like you, are his personal customers.

Forced Warm Air System: Forced warm air has become the primary type of heating system during the past ten years. In its most efficient operation, the forced warm air system calls for placement of all warm air registers on outside "cold" walls, particularly under windows to eliminate most of the condensation on windows caused by cooking, washing, bathing, etc., and to eliminate any coldness which might otherwise be experienced when sitting close to picture windows or outside walls.

This type, "Perimeter Heating," is adaptable to all styles of contemporary construction and requires close attention to the placement of heating ducts. Most such systems bring about 15 per cent of outside air into the home to assure continued fresh air supply even when doors and windows are closed for long periods. In addition, through filters placed in the cold air return in the furnace, minute particles of dust, cooking odors and greases are removed from the circulating air. Periodic changing of the filters actually makes the air inside the home cleaner than that on the outside.

Hot Water System: Modern hot water systems employ the same general techniques as good forced warm air systems. The burner maintains water in the boiler at a determined temperature, and the water is then circulated to convectors (radiating fin-like units) placed on the outside cold

wall. One disadvantage is that this system tends to re-heat existing air within the home, which may require occasional "airing out" to restore fresh air and humidity balance.

An important consideration in a hot water system is its relatively higher cost. A considerable amount of plumbing must be added to the original structure to accommodate the circulation of hot water.

Steam Systems: Steam systems essentially are the same as hot water systems, with the exception that temperatures in the boiler are higher, as the system produces steam for radiation from the convectors or radiators which have been installed. Steam or hot water systems have been popular in areas where long sustained periods of cold weather are encountered, particularly where the winter lasts two or three months or longer, and outside temperatures may fall to zero or below for an extended period.

Broad Choice

There are many models and sizes of burning equipment, each with its own special characteristics and application, to suit the heating needs of every size and style home. There are also several basic design differences in the oil burner itself, all of which are tailored specifically to do an efficient job as applied to home requirements.

Each of the independent heating oil dealer members of the Oil Heat Institute of Washington stands ready to be of service. His business is to provide for your heating comfort in the most efficient, practical and economical manner.

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ANALYSIS OF OIL BURNERS

By PAUL E. TRUMBULL

Yes, there IS a big difference in oil burners. In today's modern oil heating systems there are three primary types of oil burners offered for your selec-

tion. They are: Pressure, Rotary, and Vaporizing. Of these three basic types the pressure burner is the most widely used. For the purpose of this article,

only the pressure burner will be discussed. A direct comparison will be made between the two principles of such burners. Vaporizing oil under High Pressure, and under Low Pressure.

There are two principal differences in pressure burners; one, of course, is in the operating pressure, and the other is in the method of handling the air necessary for combustion. When we speak of pressure in oil burners we refer to the pressure generated by the pumping unit, which has two primary functions. One, to lift the oil from the storage tank, and, second, to force the oil through the nozzle in the form of a spray or combustible vapor. It is almost impossible to light an unopened magazine; yet the same paper, when torn to bits, lights easily and burns completely. This is the FIRST LAW of correct combustion. The normal High Pressure oil burner operates on approximately 100 pounds pressure per square inch in a gear-type pump, using this force to drive the oil through a pin-point nozzle opening which breaks the oil down into a vapor. This vapor enters the combustion area at an average angle of sixty to eighty degrees. Oil at this stage is still practically non-combustible. Oil must be

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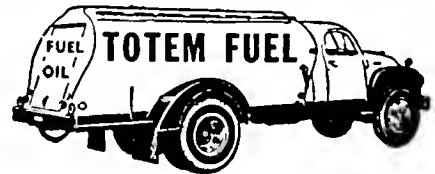
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THREE TYPES AVAILABLE

mixed with air, it will not burn efficiently in a liquid state. If you lay a lighted match in an ash tray it will soon go out for lack of air; but if you hold it on the point of a pin the entire match will burn from end to end because it is surrounded by air. This is the **SECOND LAW** of correct combustion. The method used by the High Pressure burners is to introduce primary, or combustion air through the blast tube which in most cases has turbulent vanes to force the air into a spiral motion, and a cone or choke ring to compress and direct the angle of air so that as it leaves the blast tube it enters the oil stream at an opposing angle. This opposition and force completes the vaporizing process of the High Pressure Oil Burner.

In contrast, the Low Pressure burner operates on pressure as low as ONE pound per square inch, using a centrifugal air pump. This extremely low pressure is all that is required to force oil from the pumping unit to the nozzle. The internal vacuum created by this low pressure has sufficient capacity to lift the oil from the storage tank to the inlet valve of the burner. From this point on, true product engineering has its effect on the consumer's pocketbook. Internally the Low Pressure burner meters drop by drop the exact amount of oil required to meet

the heating requirements of the home. To this oil is added the exact amount of air required to form an Oil-Air vapor. The famous Lifetime Guaranteed, Oil-Air Nozzle does not depend on an angle of spray as does the high pressure nozzle. The opening is approximately the size of a matchstick, actually $\frac{1}{8}$ on an inch in diameter. This nozzle and its internal port assembly create the final stage of oil-air blending. In the swirl chamber of the oil-air nozzle the accurately metered oil and internal air are brought together in a swirling motion which breaks up the sluggish fuel into a light oil-air mist (just as you would beat an egg into a frothy mixture). This perfect oil-air froth, swirling clockwise, emerges from the large opening of the nozzle and enters the combustion chamber in the form of a vapor ball rather than an angled spray. Because the oil is completely emulsified into the state of millions of microscopic air bubbles surrounded by a film of oil it burns completely, with no waste. As a consequence the fire temperature is several hundred degrees hotter than the high pressure fire. Secondary air is supplied in the same manner to the low pressure burner, as the primary air in the high pressure burner, through the blast tube. A relatively low volume is re-

quired in the low pressure burner, however, as this air is used only to support combustion. By its internal oil-air blending, the low pressure burner takes care of both the First and Second Laws of correct combustion.

Many claims have been made about the ability of a low pressure oil burner to burn sub-standard oils such as crankcase, transmission, and rear-axle drainings, even a little water has been thrown in to completely mystify the consumer. These claims, although true, are actually misleading and of no practical value; in fact, to burn such products would void the U.L. approval on the burner. No oil burner should be expected to operate efficiently using a sub-standard fuel. To you, the most important claim made by the manufacturers of low pressure burners is the extreme efficiency of operation, low maintenance cost, and savings in fuel consumption. This saving has been proven to be from fifteen to forty percent, depending on the application or replacement of existing equipment.

There have been loose statements made regarding the availability of competent service on low pressure burners. To reassure the prospective home owner in the city of Seattle, there are over one hundred qualified service men in this area, trained in the service schools sponsored by the Oil Heat Institute, and the regular

(Continued on next page)

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Oil Burners... (Continued)

factory-training courses made available by the manufacturers of such equipment.

The low pressure principle of oil-air atomization is not new. This principle was originated in 1917. It means that 42 years of engineering skill have gone into a product to bring you unequaled economy, plus trouble-free performance. Oil is metered—does not depend on measurement by a pin-point nozzle. As a consequence, you burn only the amount of oil required, at rates of as little as four tenths of a gallon per hour. High pressure burners cannot burn oil efficiently at rates of less than seven-tenths of a gallon per hour. This is important to you, the home owner; as an example, the heat loss on your home may require only one-half gallon of oil per hour to recover this loss, only a low pressure oil burner can efficiently atomize oil at this low rate. Important also, is the service and maintenance of your oil burner. The low pressure burner can have as little as one moving part which is self-lubricated, there is practically no owner maintenance necessary on such a burner.

Before you buy, check these important differences in oil burners.

METERED LOW PRESSURE BURNERS

Oil is carefully measured, a drop at a time by the thrift unit regardless of weight or viscosity.

Two-source air supply, metered oil and air mixed inside the nozzle create easily burned mist, metered air outside nozzle supports flame for complete combustion.

Large, low pressure nozzle does not clog. This eliminates a major cause of repairs.

As little as one pound of pressure is required for atomization. This assures smoother, quieter operation. Positively no wear.

Adjusts accurately to less than two quarts of oil per operating hour.

No critical points of wear, over 90 per cent of all Metered Low Pressure burners installed in the last twenty years are still operating perfectly.

ORDINARY HIGH PRESSURE BURNERS

Fuel is introduced in spurts by high pressure. Adjustment requires nozzle change.

One-source air supply, adds outside air only. Sluggish oil is not properly mixed with air. Does not burn cleanly, or completely.

Pin-point nozzle opening, greatest single cause of costly servicing.

Pressure of one hundred pounds or more increases wear on burner parts, steps up repair costs.

Unsatisfactory at such low firing rates required for small homes.

Efficiency decreases year after year. Average life—ten years.

Yes, it does cost only a little more to buy a Low Pressure Oil Burner. This difference is soon recovered however in economical operation, and low fuel bills. Discerning architects and engineers who really care for your comfort and convenience specify such equipment in Seattle's better homes. You can be certain of one other significant fact. The building contractor who includes low pressure oil equipment in his homes, has also included the finest fixtures, and materials available to make your Seattle Home a place to comfortably live in and enjoy for years to come.

IF YOUR FURNACE WON'T START

In the event of an oil furnace failure, these four simple checks may be made before calling a serviceman.

1. Check oil storage tank to make sure there is sufficient oil.
2. Check thermostat. The burner may not start unless the thermostat is set slightly above actual room temperature.
3. Check main electric furnace switch to make sure it is in "On" position.
4. Check electric fuses. Replace blown fuses with 15 ampere capacity and make sure that all fuses are screwed in tightly.

If above checks reveal everything in order, THEN . . . press or turn the manual re-set button located on the burner control box. If the burner runs only a minute or two and shuts down again **do not press re-set button again. Call your serviceman.**

HOW TO OVERCOME WARM AIR HEATING PROBLEMS

1. Be sure your heat loss is figured correctly. 80%* of the time, houses get the wrong size furnace.
2. Make sure your heating system is balanced and properly adjusted. 75%* of all houses lack balance.
3. Use medium settings on furnace controls so that it cycles on and off more often.
4. Keep filters cleaned or replaced. Dirty filters are the greatest single cause of heating complaints.
5. Warm air supply ducts which go through cold spaces should be insulated to prevent serious heat loss.
6. Provide a small duct leading to furnace room if there is any danger of "oxygen starvation".
7. Use at least one register near every outside wall.
8. In slab houses with cold floors, use perimeter heat in the slab, with edge insulation around it.
9. For cold crawl spaces under house, provide an extra heat outlet to the crawl space and insulate foundation walls. This actually saves money!
10. Crawl space houses should have a vapor barrier over the ground. Use polyethylene or 55 lb. roll-roofing paper with 6" overlap between sheets.
11. For split levels with a cold lower level, treat the lower level as a slab house (#8 above).

*According to the National Warm Air Heating & Air Conditioning Association.

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HOW PURE IS OUR AIR?

By PAUL TRUMBULL

Air pollution is fast becoming a major problem in cities throughout the country. Ours is no exception. Seattle is a well-populated industrial city, and cannot help but manufacture contaminated air. Our mills and factories must throw off a certain amount of noxious poison. For instance, one open hearth furnace throws a ton of solids into the air every day.

Our city has a well-enforced ordinance system, prohibiting the burning of garbage or refuse. There are no ordinances, however, to control the pollution caused by our hundreds of thousands of automobiles. They create a greater pollution problem than most of us realize. We think only of the carbon monoxide, yet the automobile produces another problem almost as serious. 750 billion particles of rubber are released into our atmosphere from every tire during its lifetime.

The air overhead is fouled by tons of fuel used by aircraft and will become worse, now that the Jet age is here. Add this to the thousands of individual homes and commercial buildings, discharging their poisonous gases from heating systems and industrial furnaces. And of course

Mother Nature adds to our problems by releasing her allergenic pollens from millions of trees, flowers, weeds and grasses.

It has been scientifically estimated that if all the particulate matter accumulated in our atmosphere during one year, were to fall to earth, our beautiful city would be buried under 21 feet of contaminated filth.

The extent of the poisonous gases held in suspension by our atmosphere was graphically demonstrated in England when these poisons were concentrated and born to earth in a London fog. 4000 people died in just one month. We, the people, are creating our own health hazards. These are alarming facts, yet they are the normal.

We have been dealing with the air outside our homes. Science is baffled in its search for corrective measures, but some day our pollution problems will be solved.

Let's take a look at the possibilities inside our homes. Here our scientists have been able to do something because they are working within controlled areas. Our Electronic era has made it possible to create a clinically pure atmosphere within our homes. Normal household dust, the type that soils our draperies, rugs and furniture,

as well as the cooking vapors and nicotine tars staining our windows and mirrors are microscopic in size.

These airborne contaminants are measured in microns. As an example, one micron equals 1/25,400 of an inch in diameter. The period ending this sentence would measure approximately fifty microns. Particles larger than five microns are usually too large to be inhaled into human lungs, yet we breath into our lungs about a teaspoon full of dirt a day.

The greater percentage of this inhaled particulate matter, falls in the range of particles smaller than one micron in size. These are the particles permanently suspended in our atmosphere due to molecular shock exceeding the force of gravity. They are the dangerous particles carrying airborne bacteria, allergens and viruses. This dust is everywhere. It appears to be invisible to the naked eye, yet it startles you when you view it through a shaft of sunlight entering your window.

Molds are another important problem, causing suffering to people afflicted with hay fever, asthma and sinus. These molds are found on grains, grasses, leaves and soil during the warm summer months. The spores of these molds, smaller than pollen, are well known in every household. They contaminate bread, grow in cheese, on bacon rind, and they will

(Continued on next page)



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THREE - STAGE - FILTERING

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2. ACTIVATED CHARCOAL FILTER

Removes vapor borne odors • Tobacco • Cooking • Cocktail Parties

3. ELECTROSTATIC COLLECTOR PLATES

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Air Purification (Continued)

mildew leather goods and clothes.

The science of Air Engineering has produced a device using the principle of electrostatic precipitation to collect and hold this harmful particulate matter.

There are various filters on the market using the static electric principle to attract and hold particles of opposite polarity. Filters employing this method of electrostatic attraction range in price from \$39.95 and up for the simplest, yet very effective method of such dust collectors. Portable machines of this type use no external power supply, transformers or rectifiers, other than the power operating the circulating fan. It derives its high voltage energy from a simple generating device driven by a belt from the fan. This principle is known as the Van de Graaf generator. It has a voltage output as high as 15,000 volts negative, yet has no electrical shock hazards because of its low current limitation of 2 microamperes. This energy is transferred to a scotch foam type filter, which electrically attracts and holds airborne particles as small as .4 or .5 microns at an efficiency of 94.5 to 99.5% within this range.

To do a really effective job of air purification on microscopic matter as small as 0.01 microns, the collector plates in an electrostatic filter must

be charged with high voltage electricity. After all, these particles are unbelievably small. It would take 25,400,000 such particles placed side by side to span one inch. A particle of tobacco smoke measures 1/100,000 inch. Enlarge this particle 25,000,000 times, and it would be about the size of a quarter. If you were to enlarge a quarter by the same magnitude it would cover the entire state of Colorado.

Filters having the ability to collect and destroy such particles draw their electrical power from our regular 115 volt AC house current. This is fed to a "power pack" with a transformer to step up the voltage, and a rectifier to convert the AC to DC. The DC voltage supplied to the collector plates can be as high as 12,000 volts.


Generally speaking, there are two types of filters available using somewhat the same, yet different principles of high voltage electrostatic attraction. One group uses the principle of a positive ionizing screen, made up of a bank of ionizing wires. Dirt particles passing through this screen receive a positive electrical charge, and are deposited on collecting plates. Filters using this principle generally require some method of plumbing and sewage connected to the unit to periodically wash away the collected

contamination. Such water wash systems are available as either semi or fully automatic. A mechanical impingement type filter is generally used in this system, and is called an after filter. Its purpose serves to keep water wash spray from entering the ductwork, and also is an emergency filter in case of power failure.

The second group does not use the ionizing screen method. Its high voltage current is distributed through a series of venetian blind type collector plates, alternately charged positive and negative with 12,000 volts of electrical current. Systems of this type are made up of from 8 to 40 plates for CFM range of 1,200 to 6,000. Dust particles entering this electrical field receive a positive electrical charge, and are collected on alternate negative plates. Atmospheric particles so negative that their polarity cannot be changed, are collected on the alternate positive collector plates. Machines of this type do not incorporate an after filter, nor do they require plumbing or sewage.


They normally are classified as a three-stage filter. The first is an efficient, permanent, washable aluminum filter, to remove the coarse dirt and lint from the air stream. The second stage is an activated charcoal filter, which removes all traces of vaporborne odors and eye-burning irritants, such as the nicotine tars from

(Continued on next page)



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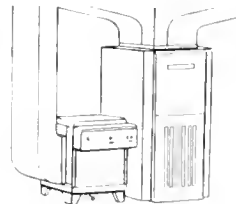
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A typical installation with a forced warm air heating system provides clean air for the entire house.

Heating Economy Through Insulation

By ROBERT DICKERSON

Many types of insulation do a big job—sharply cutting fuel bills, reducing summer heat 10 degrees or more, combatting condensation. But some are more effective than others. To appreciate the differences, it's necessary to consider the nature of heat transfer itself.

This is the simple story of insulation, what it is, what it does, how it works to make you more comfortable in your home. American ingenuity and scientific skill have worked together to make your home healthier and more livable than ever before. Some of this is achieved through carefully studied design, some through new machines to do our chores. But one of the most important developments, a silent partner to comfort, is insulation. Time-tested, proved, it provides a degree of livability with economy that can be duplicated by no other machine or agent.

Insulation is a cloak for your house. It saves you heat and fuel the way warm clothing saves you energy. Moreover, because of a peculiar property of heat, insulation actually adds to your comfort during all extremes of winter and summer weather. And this comfort can really be measured.

Cold walls are causing your discomfort and sidewall insulation is the only solution. When walls are below room temperature, our bodies lose warmth to them by RADIATION. Since radiant heat transmission does not depend on air, we continue to lose heat to cold walls and feel uncomfortable regardless of the air temperature in the room. As the weather gets

cooler, the comfort zones of our rooms shrink, and shrink, and shrink. With sidewall insulation you can eliminate shivers, the need for sweaters and save your peace of mind, plus several times the cost of the insulation in fuel bills! And you can really *live* in your *whole* house too. The light construction of many Western walls more than compensates for the general mildness in climate. Westerners have a real need for sidewall insulation and have every reason to insist upon it.

Lack of ceiling insulation hurts us in the pocketbook because most of our heating dollar is usually spent making up the heat that is lost there. Cold ceilings don't make us as uncomfortable as cold walls because less of our bodies is exposed to them. *But* during *hot* weather when the situation is reversed, uninsulated ceilings become giant "heat lamps" that make our nights hot and fretful when we're stretched out beneath them. A cool breeze or an electric fan produces a summer cold long before it gives us real summer comfort. Adequate ceiling insulation produces summer slumber and is such winter economy we can't afford to do without it!

There are few problems that give a home owner more headaches than the condensation of moisture in walls and ceilings. One of the most effective ways of stopping moisture is to insist on vapor barriers on all insulation. Most effective vapor barrier type of insulation is Aluminum clad insulation, and also your Aluminum Foil blanket insulation. Aluminum Foil has a zero permeability to moisture, and due to its high reflectivity not only stops the heat but also stops the

moisture transmission.

Insulation is only as good as the way it is actually installed. It is very important, therefore, to use an experienced, competent insulation contractor. Companies that know insulation through experience can study your house plan and figure the actual cost of putting in an engineered insulation job for homes, commercial buildings or existing residences at no cost for this service.

Besides comfort in insulation is the important fact that it pays for itself over a period of years. By actual savings alone it is like a good investment—it pays high dividends.

When heat leaks out rapidly in winter due to a lack of temperature barrier of insulation your heating plant must run longer and harder, consuming more fuel to make up for the heat loss. The rate at which heat flows out through walls, floors and attics is a measure of the extra fuel your heating plant must use just to replace this wasted heat.

The average home owner spends about \$200 a year for heat. But by adequately insulating ceilings, walls, overhangs and garage ceilings, he can easily realize a savings of \$50 to \$75 a year. Thus, in three to five years he completely amortizes the cost of the insulation.

For comparison of different types and amount to use in a home or building, the first 1 inch of insulation has the most effect, then the second inch and on to the third and fourth inch of insulation. It is a case of diminishing returns.

The cost of insulation is no higher today than it was ten years ago. Credit for this encouraging fact is due to high productivity and a competitive market.

Air Purification (Continued)

tobacco smoke, the heady aftermath of a cocktail party, and the smell of cooking onions, cabbage or cauliflower. Its third stage is electrostatic. These machines are cleaned manually, once or twice a year.

Electrostatic precipitating air filters in both groups effectively remove microscopic particles to a point in excess of 90% efficiency. Costwise, you can expect to pay upwards of \$450.00 to live in an atmosphere of near purity.

To those people suffering from allergies, such as hay fever, sinus and asthma, this is a small price to pay for the wonderful relief science offers through the use of the electrostatic filter. In addition to better health, you can expect to substantially reduce your fuel bills. Your home will stay clean longer, with less housework, dusting, cleaning and redecorating. Your drapes, rugs, furniture and tapestries will stay fresh and clean up to four times longer than a home without such a "Mechanical Housemaid."

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VENTILATE FOR COMFORT

By ROBERT L. PELTON

Most people today recognize that proper and adequate ventilation must be provided in the modern home for comfort and economy. By contrast, very few recognized this need when the original kitchen ventilator was introduced by West Wind in 1925.

After 35 years of pioneering and consumer education most homes now have some form of mechanical ventilation. This is an auspicious beginning, but the need for better ventilation continues to grow. For example, we rarely find a better built home without a mechanical means of ventilation in the bathroom to relieve moisture and odors; and the elimination of moisture from laundry areas with their new automatic washers and dryers is now a must.

PLAN FOR ADEQUACY

With tighter construction and well-insulated homes some means of ventilation must be provided. This calls for careful planning to achieve comfort. Since installation costs often exceed the cost of the equipment, and because it is relatively permanent, cheap equipment is not the answer. Selection of adequate equipment and having it installed properly are prime requisites for the home builder or remodeler.

Much of the ventilating equipment today is as underpowered for the job as the sales literature is overpowered. The latest FHA regulations on ventilating equipment indicate that this lending agency now recognizes that installed performance is the true measure of value. By establishing standards

of performance for kitchens of 15 air changes per hour and 12 changes per hour for bathrooms these regulations—if followed—will help protect many prospective home buyers or remodelers.

Proper application requires knowledge of available equipment, air movement and common sense. An architect, ventilating engineer or qualified installer can help you plan properly. When installing a unit in the ceiling with attached ductwork to the outside a blower type unit should be used to overcome static resistance in the system. The less duct and the fewer elbows, the greater the efficiency. Here again, FHA requires *individual* metal ducts that discharge to the outside. An outside wall fan is the most efficient. Therefore, some effort should be made to utilize this type—with its exhaust directly through the outside wall—by locating the cooking area in close proximity to an outside wall. An open-type kitchen calls for higher capacity equipment. This also applies to barbecue fans. A multi-speed control for kitchen fans and blowers is recommended for their increased utility so that they may be adjusted to your particular cooking needs.

The ideal location for most kitchen units is high on an outside wall or ceiling to take best advantage of natural air currents.

Of particular interest to northwest residents who share the common problems of indoor humidity, window weeping and outside paint peeling is the fact that there are automatic mois-

ture-controlled blowers available. They are designed to eliminate excess moisture, thus eliminating the damage it causes. Each unit contains built-in controls which are prewired to simplify operation and cut installation costs.

Performance, comfort and ease of cleaning should be the virtues remaining after the glamour and newness wear off. And remember, the best "life insurance" for your equipment is a quality motor.

CARE AND CLEANING

Clean how often?—At least twice a year.

Why?—It assures top performance, and is easier than cleaning an excessively dirty unit.

How to clean?—A detergent solution or petroleum solvent is most effective. Simply apply with a brush or cloth, then wipe clean and dry.

Oil how often?—Add a few drops of SAE 20 motor oil to the motor at least twice a year.

Easy to remove?—The better units are designed for easy removal. Just loosen the surface screws and disconnect the electrical cord.

Are filters required?—Only if the unit is located in a hood directly over the cooking surface, because of the fire hazard.

Should filters be cleaned often?—Yes, if filters must be used they need frequent cleaning. Most filters reduce the efficiency of the unit about 25% even when clean.

ELIMINATING THE WINDOW CONDENSATION PROBLEM

By RALPH HEUVING

Window condensation, if neglected, can cause the peeling of paint from wood sash; rusting of steel sash; rotting of window casings; soiled draperies, curtains, rugs and window sills. The problem should not be neglected.

Condensation results when the vapor-laden air inside a house comes in contact with a cold surface. The warm air in the room is drawn to the colder window, which not only causes a draft on the floor, but also becomes cooled by the window surface, thereby losing its moisture.

The problem may be overcome either by 1) lowering the relative humidity of the air, or by 2) increasing the surface temperature of the window. The only practical solution is the latter.

Raising the temperature of the window may be accomplished either by perimeter heat (with the heat source placed directly under the window), or thermopane (double windows) may be used.

Insulating windows are the best solution. They control moisture, add comfort, increase value of a home, and save on fuel bills.



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HOW TO CONTROL MOISTURE

By PROF. BROR L. GRONDAL — U. W. Coll. of Forestry

Weather conditions in Seattle are so much more favorable than in other sections of our country that moisture control in the home need not be much of a problem. However, many homes even here are bothered with condensation of moisture on windows and other colder surfaces during winter months. Sometimes, drawers in furniture may stick, while at other times joints in the same furniture may loosen. Paint may blister and peel, and decay of floor joists and subflooring, as well as other lumber in the house may develop.

What causes this condensation, and how can it be avoided or controlled? The answers are rather obvious to a technically trained individual, but may escape the person who has paid no attention to meteorology. In each daily report by the Weather Bureau, the relative humidity of the air at 10 a.m. is given. This simply means the ratio of the actual steam or water-vapor pressure in air at the temperature when the reading was made to the maximum steam or water-vapor pressure that could exist at that temperature. Relative humidity is expressed as a percentage. When the relative humidity is 50 per cent, the steam pressure in the air is only half as great as it could be, if enough water were present. At ordinary temperatures, it is seldom, indeed, that the relative humidity of the air rises as high as 95 per cent, even when it is raining. In very "dry" weather it may go as low as 20 per cent, or even 15 per cent.

Wood (as well as most other organic materials) absorbs moisture when the relative humidity of the air

is high, and loses moisture when it is low. It comes to an "equilibrium moisture content" at any given relative humidity regardless of temperature (within the usual atmospheric range). Wood also expands when it absorbs moisture, and shrinks when it loses moisture. A dining table that weighs an average of 100 pounds may absorb or lose as much as three-fourths of a gallon of water with atmospheric moisture changes.

Well, if Seattle's weather is so good, why is moisture control sometimes a problem? Yes, it is often a problem, but that problem is man-made.

During the summer months, the out-of-door temperatures in Seattle are seldom uncomfortably high. At the same time, the relative humidity of the air is usually rather low. We have virtually no "sultry" days. "Back East" there are usually many days during the summer when the relative humidity is very high while at the same time the temperature of the air is also high. Clothes, damp with perspiration, remain damp. Electric fans stir up the air in houses. Furniture, windows, drawers, and even the bed mattresses—absorb a lot of moisture. This may continue day after day—in some sections for many weeks. Seattle never has such weather. Then again, when winter comes "back East" houses must often be heated as much as 90 degrees above outdoor temperatures. This means that the relative humidity in a house may drop to such a low level that it may seem desirable to keep a tea-kettle boiling on the stove to supply at least a little moisture to

the air. Unless storm sash is used, windows may become coated with ice on the interior surface due to their action as condensers. On the other hand, in Seattle during winter months, the temperatures rarely drop to freezing. Much of the time, a 25 degree temperature rise may make a home quite comfortable. Out-of-doors the air during these months will be at a rather high relative humidity, and this means that the air inside of a house will seldom become too "dry."

In years past, condensation of moisture in homes in Seattle was seldom enough of a problem to be worthy of mention. Why, then, is there sometimes trouble today? Oddly enough, it is usually because houses are better built! In an old-fashioned house heated with stoves, to keep the fire going, the stove dampers had to be open. If they were closed, oxygen from the air was not available for combustion. With open dampers a lot of air went up the stove pipes to the chimneys. Nature doesn't care much about a vacuum, and therefore at least that equivalent quantity of air had to leak into the house. This air leakage kept the relative humidity down.

Now, let's look at a modern house. It's often tight—tight as a drum. Windows and doors are weather stripped. Walls and ceilings are provided with vapor barriers so that moisture can't come in (or get out!) The roof may be virtually gas-tight. Heating may be accomplished by radiant energy, hot water or hot air. Some houses rest directly on concrete slabs placed right on the ground. Others have crawl spaces under the floor joists, with no moisture barriers over the earth floor of the crawl space. Some have good, full basements. A great many houses now have clothes driers. Water vapor from home laundries, from kitchens, bathrooms, from floor slabs or from bare earth in crawl spaces can create a lot of trouble. The remedy? It's usually quite simple. Just add these modern appliances that are an absolute necessity in many of the homes that are being built in this area today: attic ventilators, ceiling ventilators to the attic space, outdoor vents for clothes driers, kitchen and bathroom ventilator fans. Then seal off the earth fills in crawl spaces under floor joists, using polyethylene sheeting or asphalt emulsions, and provide adequate vents so that the relative humidity in the crawl space will remain at an average low level. In many instances, when the problem seems stubborn, a small intake pipe from out-of-doors (usually about the size of a downspout drain pipe) connected to the cold air duct side of the furnace will correct matters. In an extreme case, an electrically operated dehumidifier may be needed, but in the final analysis, adequate ventilation may be all that is needed.

*Window condensation problems
in your Home?*

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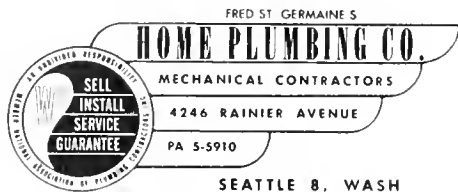
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A PLUMBING INSTALLATION GUIDE

By C. F. RAINES, former Chief Plumbing Inspector, City of Seattle

When contemplating the construction of a new home or extensive remodeling, there are several items which the home owner or a prospective home owner should know. Although you may be engaging the services of a competent building contractor, your most authoritative source of information is through the Seattle-King County Department of Public Health, Plumbing Inspection Section. Information on all types of new installations or remodeling work regarding plumbing may be obtained by telephone calls to this branch of the city government. A few of the points which are of interest to the public are noted in the following:

1. When engaging a building contractor or a plumbing contractor, one of the main sources of reliability is to determine whether or not he holds a valid City of Seattle or King County master plumber's license. According to the regulations, a home owner is responsible to determine this fact and may be held liable for any faulty installation.

2. The first part of the equipment which should be installed on a job whether it is remodeling or a new installation is a plumbing permit issued by the Department of Public Health. This permit should be placed on the job in a conspicuous location and should remain there until such a time as the installation is completed. No piping, whether it be waste, vent or water piping, shall be covered or any foreign material applied to the piping which would hide its true identity. A permit is issued for the protection of the person who owns the building or who may buy it in the future. Under no circumstance should an installation of plumbing be accepted until it has the approval of the inspector from the Department of Public Health. This applies to everybody whether it is installed by the home owner of a single-family residence or a master plumber. The approval of the inspector on a plumbing installation is your assurance that you have a sanitary job and one which will probably be trouble free.

3. The plumbing codes do not prohibit a home owner from installing, re-installing, replacing, constructing, or re-constructing plumbing installa-

tions in his own single-family residence provided he must comply with all sections of the plumbing code. For an owner to obtain a permit, it is necessary that he convince the Chief Plumbing Inspector of his ability to install the work in accordance with regulations. To determine this, it is required that a single-line drawing be made of the waste and vent pipes which shows the sizes of the pipes and the names of the fittings and that he be able to explain the drawing to the inspector. Regulations provide that only one such permit be issued per year to any one owner. This regulation holds true in both the City of Seattle and the County of King.

Minimum Fee

4. The fee for a plumbing permit is \$1.00, minimum charge, for each permit. Where there are two or more fixtures, the charge is 75 cents per fixture. As an example: one sink would be \$1.00, or one sink and one dishwasher would be \$1.50. This fee is the same regardless of whether the home owner or a plumbing contractor is purchasing the permit. If a permit is issued by the Health Department for installation of plumbing and the work is abandoned or stopped for any reason for a period of six months or more, the permit will automatically be cancelled and before any further work can be done on this particular installation, a new permit must be obtained based on the same fee as the original permit which was issued.

5. Anyone installing plumbing, whether it be a plumbing contractor or a home owner, when joining cast iron soil pipe, which is required on all installations below the ground, must use oakum and hot molten lead after which it must be caulked so as to make it water tight for testing at the completion of the installation. When using cast iron soil pipe for the main waste stack, it is permissible to use copper tubing for other waste lines in conjunction thereto. Where connections of this type are made with cast iron soil pipe, proper adaptors must be used whereas if galvanized steel pipe is used, the pipe may be caulked directly into the proper sized hub at the soil pipe. All pipes should be laid in true alignment so that no pockets are allowed for the

collection of waste materials and cause undue plugging of system. All piping should be substantially strapped or hung so as to allow no sagging of the system with a minimum grade of $\frac{1}{4}$ inch per lineal foot.

6. Water pipe from the meter to the house shall be $2\frac{1}{2}$ feet below the surface of the ground to protect pipe from freezing during cold weather. A stop-and-waste valve shall be installed at the lowest point in the system so that when shut off, all pipes to fixtures shall be drained to that point. All pipes shall be substantially hung or strapped so as to cause no sags or low spots which may not drain properly. An air chamber must be installed at all vertical risers or drops of six feet or more and at the highest termination of hot and cold water within the building. Air chambers must be installed on all sinks. It is recommended that air chambers be installed on all automatic washers and automatic dishwashers or where a quick closing valve is being used. An air chamber must be at least 16 inches long, the same size of the pipe it serves, and installed in a vertical position. A pressure test shall be made on all water pipe installations.

7. If an air conditioner or heat pump system incorporating mechanical refrigeration is to be installed in a residence, a permit must be obtained and inspection called for at the time of installation and before any work is covered or concealed. This is to insure proper installation, that a safe refrigerant is used, and that the system has proper safety controls as required by the Mechanical Refrigeration Ordinance No. 84297. The permit can be obtained by an owner or a licensed contractor and shall be posted near the unit.

Anyone who is building or remodeling his plumbing installation should feel free to call the Public Health Department regarding information which will make it easier for him to get a sanitary installation and possibly a more trouble-free installation. It will make the inspector's job easier as well as assuring you, the home owner, more confidence and peace of mind in knowing that the plumbing has been installed correctly.

What You Should Know About Plumbing

By MARK GREY, Exec. Secretary, Associated Plbg. & Htg. Contractors of Wash.

Every house must have a main cold water supply pipe, generally from a meter installed by the city. From this pipe various other pipes carry cold water to the water heater and to all the other fixtures or appliances or outlets where cold water is desired. The same applies to hot water pipes which are fed from the water heater.

In addition there are waste pipes from all your fixtures to the sewer pipe, which discharges the waste material to a main sewer or septic tank. One of the most important pipes in your homes is the vent pipe, installed for the purpose of carrying away poisonous sewer gasses and bringing in needed fresh air to prevent "back siphon" action which would cause the waste water to mix with the fresh water.

In addition to the plumbing pipes most homes must have fuel piping for oil or gas for heating purposes or perhaps cooking.

Who is responsible for installing all these pipes, making sure they are properly sized, constructed of the proper material, joined together with the correct fittings, with valves in the right places and traps installed where needed? Of course the obvious answer is the plumbing contractor.

Delivering pure water to your meter is the responsibility of the local authorities. You are further protected by sanitation laws, licensing of qualified plumbers, plumbing inspections by the city inspector, but your plumbing contractor is the link between the city water supply and you. His skills protect your health and serve you in planning, installing or servicing your growing water needs.

Every householder should familiarize himself with the location of all the plumbing piping in his house and be particularly familiar with the location of all shut-off valves. Also, everyone should know the following:

1. How to make minor plumbing repairs.
2. What to do in an emergency.
3. How to plan plumbing improvements.
4. When to call a plumber.

Plumbing repairs by the amateur should be restricted to repairing or replacing leaky faucets, first aid for temperamental toilets and the cleaning out of plugged lines if the stoppage is of a minor nature. Under no circumstances should the unskilled attempt to repair, relocate or move or install piping for the purpose of bringing in pure water or carrying off waste water.

What To Do If:

If you have a leaky faucet there are four simple steps to follow:

1. Shut off the main water supply, or if there is a valve on the water supply to the fixture with the leaky faucet, shut that valve off.
2. Loosen the nut just behind the faucet handle and screw out the stem. (Wrap adhesive tape on the nut to prevent wrench marks.)
3. Remove the brass screw and worn rubber washer at bottom of stem.
4. Replace with new washer and brass screw of same size as the old ones. Washers and screws are available at your neighborhood plumbing shop.

A loose washer often chatters. Be sure it is screwed on tightly. If the faucet still leaks the valve seat or stem is wearing—**CALL THE PLUMBER.**

If you hear the annoying sound of running water at the toilet, but do not see it going into the bowl, you can do this:

1. Check the float for damage. It may be water logged and needs replacing.
2. Check the float rod. If it isn't shutting off the water supply bend it down gently until the float stops the water at the proper level before spilling into the overflow.
3. If neither of these measures does the trick—**CALL THE PLUMBER**—and avoid more serious trouble that might be caused by fooling around with the various parts in the toilet tank.

If water continues to drop into the toilet bowl, it can come from only one place—through the flush connection from the tank to the bowl.—Here is what you do:

1. Shut off the valve on the water supply pipe to the tank. Flush the toilet and the tank will not refill with water.
2. Check the tank ball—the rubber stopper connected to a "lift wire." This ball should drop neatly over the opening in the bottom of the tank.
3. Also check the flush handle mechanism, it may be sticking and keeping the tank ball from going into place.
4. If the tank ball is worn or the lift wires are bent or too corroded to work properly, the amateur can generally replace with new parts which can be purchased at any plumbing shop. If you cannot fix it — **CALL THE PLUMBER.**

If you have a plugged drain line or toilet bowl and you insist on trying to remove the stoppage there are a few simple rules to follow:

1. You can try a rubber suction cup or "plumber's friend."

2. If the stoppage is in a drain line from a sink and the "plumber's friend" doesn't do the trick you can do two things.—First you can try some drain pipe cleaner, which should be used strictly in accordance with direction on the label. Use only a small amount at long intervals.—Second if the trap has a clean-out plug you can remove the plug and attempt to dislodge the stoppage with a stiff wire hooked on the end. Keep a catch pail under the trap.

3. Do not attempt to dislodge a stoppage for objects that have gone beyond the trap — **CALL THE PLUMBER.**

If you have a plugged toilet bowl here is what to do:

1. Try the old reliable "plumber's friend."
2. If the object causing the stoppage is stubborn you may try to dislodge it with a toilet auger or flexible wire tool, **BUT USE CAUTIOUSLY.**

3. If the sewer backs up expert service is required — **CALL THE PLUMBER.**

In the event of an emergency such as leaks, stoppages or what have you **FIRST** shut off the main supply valve and **SECOND** — **CALL THE PLUMBER.**

If you are planning to remodel your present house or to build a new house here are a few helpful hints:

1. Place new fixtures close to existing pipes. This could eliminate extra carpentry and plumbing work.
2. Do as much work as possible at one time while the pipes and the walls are exposed.
3. Have existing plumbing checked for weakness, catch trouble before it starts.
4. Rough in pipes for future plans to avoid ripping out walls a second time.
5. If possible, plan up- and down-stairs plumbing on the same wall. It saves extra pipe and carpentry work.
6. Use modern, space saving fixtures. Every foot of home floor space is valuable.
7. Beware of "BARGAINS" equipment or labor. Plumbing is permanent; it stands the test of time.
8. Use qualified plumbing contractors who Sell, Service, Install and Guarantee.
9. In planning "Do-It-Yourself" projects remember that for health and safety reasons plumbing must pass inspection by local authorities and mistakes can be costly.



Painting and Wood Finishing

A Guide To Wood Finishing

By MERRILL HEALD

Knowing WHY and HOW wood is finished should be of interest to all of us. In construction and decoration wood will be a prominent factor for years to come. But it is too often taken for granted.

To thoroughly understand it we must first realize that trees grow in many different environments such as high or low elevations, wet or dry climates. Some grow rapidly and some grow slowly. Variable conditions such as these greatly affect the use and the method of finishing of wood.

There are two general classifications of wood, "hard" and "soft." Generally, these terms have no bearing on the actual hardness or softness of the wood. The botanical group of trees that bear leaves (deciduous) produce hardwoods. Those that bear needles and cones (coniferous) are considered to produce softwoods.

In both hard and soft woods there

are cells (or pores) of different size and shape. Thus, we find another distinction between woods: open-pored and closed-pored. Because of these natural growth phenomena, wood should be identified in the proper classification and finished accordingly.

If you desire the utmost in beauty and serviceability in wood it would behoove you to study the proper procedure and materials to use. Too often the desire to find a short-cut has taken precedence over true knowledge of wood, and the best methods of treating and finishing it.

The following information will help you.

The first material that is applied to bare wood is obviously most important for it becomes the "foundation" which will control and be responsible for results from each succeeding material. Each material or cost should be applied with a specific purpose in

mind. There will always be exceptions to any general outline of procedure—and if so, a qualified authority on wood finishing should be consulted as to varying steps and materials.

Following is a *general guide for sequence* for proper wood finishing.

Step (1) Wood should be SEALED.

Step (2) Wood should be FILLED—if necessary, as in the case of open-pored woods.

Step (2a) Wood should be stained if a different color or tone is desired.

Step (3) Wood must be finished—protection depending upon appearance, usage, sheen and degree of hardness and naturalness desired.

An attempt to accomplish more than one of the above steps with one material or one application is a "short cut" or a compromise with quality which good wood finishing will not permit. Trying to hurriedly or cheaply obtain such a result always leads to disappointment, costly maintenance or refinishing.

(Continued on next page)



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Guide To Wood Finishing (Continued)

Let's examine the procedure more closely.

SEALING

The prime purpose of sealing is to equalize the porosity of wood which is caused by summer and winter growth and other variables in the wood. A good sealer then will hold natural tones, dry rapidly and require a minimum of sanding.

There are two types of sealers. One is a "building" type which is fairly heavy and creates a surface film. It forms a barrier between the wood and final finish coats. While this type of material has a place in some wood finishing, it has the disadvantage of becoming somewhat brittle (some will discolor) and it does not lend itself to a following coat of filler.

The other type of sealer is a crystal clear sealer which penetrates the pore structure of the wood. It leaves no surface film to become brittle and discolor, and it allows stain, filler and/or finish as desired. This sealer also retards the wood itself from discoloring under other materials which may be applied. There are two ways in which wood will change tone. One is the wood itself—and the other is the change in the materials applied to it. Therefore, a sealer that will retard the discoloration of wood itself is very important.

FILLING

The filling of wood is for one purpose—to level the open pores ("valleys") in open-pored woods such as mahogany, oak, walnut, sycamore, ash, etc. Obviously closed-pored woods such as birch, pine, fir, cedar, maple, etc., do not need a filler, for there is no place for the filler to go.

The type of filler used is important. It must be a material that is easy to brush on, that will settle down in the wood cavity and still be easy to wipe off the surface, and one that does not pack into the cavity (valley). Also, filler material must be of such a nature that stain and further surface protection coating may be applied over it without affecting the filler. The handling of filler is not difficult, and is essential for proper results. If open-pored woods are not filled in the proper sequence of finishing the wood never will appear finished, and will attract dirt and streaking in the cavities.

STAINING

If the natural color of wood is to be changed, this may be accomplished by staining. Because of the variables in wood there are different types of stains, methods of application and sequences to follow. Basically, a stain should give the tone desired, but should also retain the natural beauty of the wood.

A penetrating stain that will not leave a surface film is most desirable. Your supplier should offer advice, and willingly run samples of stain so you will know how it will appear on a particular wood. Spirit or water stains,

creosote stains and many types of oil base stains can present difficulties if not properly handled.

Stains with a benite base are easily handled and controlled. They preserve and penetrate deeply, may be used either interior or exterior, and may be finished over with any protective finish desired.

Generally, this type of stain should be applied after sealing and filling so that the stain will go on uniformly. This applies to the bare wood, or preferably, following a primer coat of clear wood preservative. When a stain of this type is used the depth of color tone may be easily controlled by the degree it is brushed out, or the drying time.

When spirit or water-type stains are used it is usually necessary to stain the bare wood, protect the stain with a sealer, and then fill — if needed — with a matching colored filler. Good fillers may then be finished with the desired clear protective finish coating.

FINISHING

The finish material used is the final "overcoat" of protection. It is advisable to finish wood in keeping with its cost, beauty and desired effect.

Modern chemistry has provided finishing materials that overcome the disadvantages of shellac, varnish and lacquers. Difficulties of discoloration, brittleness, dust control and application have been overcome. Acrylic or synthetic base materials are excellent in holding the natural wood beauty while providing good protection.

Proper puttying of nail holes is essential. Colored putties, intermixed if necessary, should be properly applied just prior to the final finish coat.

If a soft, velvety "rubbed effect" is desired in the finish, but a hard surface

DO'S & DON'TS ABOUT BRUSHES DO

Buy a good quality brush for best results. Look for abundant, full bristles of either genuine hog bristle or flagged synthetic filaments.

- Buy the right size and type for the job.
- Check brush for a balanced mixture of bristle lengths, good elasticity, comfortable grip and firmly implanted bristles.
- Take good care of your brushes. The few minutes it takes is a good investment.
- Clean brushes immediately after using. With oil base paints, clean brush with turpentine. With shellac and stain clean with alcohol. Lacquer is best removed with lacquer thinner. With emulsions, latex, calcium and other water-thinned paints, use water with a little soap or ammonia added.

DON'T

- Use a new brush without preliminary treatment. Before using an oil base paint allow brush to soak 12 hours in linseed oil. Before using shellac, water-base or latex paint, wash brush with soap and water.
- Allow brush to stand upright on bristles when not in use.
- Use brush as a stirring stick or a hammer.
- Allow brushes to soak in water or paint.
- Allow bristles to become matted, snarled or hardened.

coat is not needed, a new material containing wax leaves a finish at the surface, but not a film over the wood. It may be buffed to produce the desired effect.

Wood finishing is made easier and far more rewarding through knowledge of the proper procedures and materials.

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PAINT PEELING AND ITS CAUSES

Paint peeling or blistering is often blamed in error, on the manufacturer. But it is due chiefly to a combination of not following directions, and having limited knowledge as to the causes of peeling.

The most common causes of peeling are:

1. Dampness in the wood.
2. Dampness in back of or on the wood.
3. Poor priming coats.
4. Old paint loosely adhering and not thoroughly cleaned away.
5. Wood not adequately seasoned or properly prepared for painting.
6. Faulty construction.

Peeling and blistering may result from condensation of moisture within the house. Moisture penetrates the walls until it reaches the underside of the exterior paint. Then, upon reaching the non-porous paint, the moisture gathers until a blister is formed. Because of pressure, plus the fact that paint cannot adhere to a wet surface, the paint peels.

To eliminate this problem, the use of a vapor barrier is advised. For new construction a membrane type vapor barrier is best. These include "Duplex" papers, surface-coated and glazed asphalt-saturated building paper, and aluminum foil. For existing structures we advise application of two or three coats of vapor-resistant paint or varnish. These include most aluminum, asphalt, and lead and oil base coatings.

DECORATING HINTS

- White or light ceilings are most desirable where light reflection is important. A dark ceiling makes a room seem lower and absorbs the light. For an unbroken color line, paint the ceiling to match the walls.
- A bulky or unattractive fireplace may be camouflaged by painting it to match surrounding walls.
- Contrasting color on wood trim enhances fine architectural lines, and is advisable for larger rooms only.
- Matching walls and woodwork makes small rooms look larger, hides unsightly cabinets and trim, covers poor features, and allows greater leeway for use of other colors in the room.
- A contrasting wall is most effective when not broken by doors or windows, and when it accents a piece of furniture or a grouping of furniture. Color used should be repeated or balanced elsewhere in the room.
- Repeat colors throughout the house for continuity.
- A long room may appear better proportioned by painting the end walls a deeper color than the sides.
- Use wallpaper on one wall to add interest and color as necessary. Make sure colors in paper match or blend with others in the room.
- Modern blond furniture will be enhanced by use of deeper and richer wall colors. Avoid cream and ivory.

BETTER RESULTS WITH PAINT

It is not difficult to acquire the know-how for better painting. Following the proper procedure will make painting a rewarding and profitable venture. It's mainly a matter of having the tools and materials to do a complete job... of correct preparation of the surface... and of following the directions on the label.

TOOLS AND MATERIALS

Before you start the job, make sure you have:

Solvent, abrasives, paint or varnish remover, wax remover, crack filler, putty knife, brushes or roller or spray gun, thinner, strainer, stirring paddle, wide-mouth can, hand cream, rags, newspapers, ladders and boards.

PREPARING SURFACE

For interior surfaces, first remove all wall hardware, curtain rods, etc. Remove all moveable furniture from the room, and cover the rest. Clean all surfaces if soiled with a solution of Trisodium phosphate ($\frac{1}{2}$ cup to 1 gal. of water). High gloss surfaces should be roughed with sandpaper, steel wool, or liquid sandpaper. Old calcimine on ceiling may be removed with hot water. Remove loose paint with a scraper. Edges of chipped paint should be feathered with sandpaper.

New wood should be sanded smooth, then thoroughly dusted. Previously painted woodwork with rough spots and flaked areas should be scraped clean and sanded. Cracked or gouged areas may be filled with a crack filler, then sanded or smoothed with a putty knife.

All woods should have a coating of sealer before filling and painting.

Open-grain woods should first be leveled with filler. Close-grain woods ordinarily do not need a filler. Before applying enamel, the surface should have a coat of enamel undercoater.

New plaster needs a special coating of size or primer-sealer before a paint containing oil is applied. Water-thin paints do not need such a preliminary coating. Allow newly applied plaster about three weeks to dry before painting.

Previously painted plaster calls for thorough cleaning. Remove grease and finger marks using a solution of Trisodium phosphate (not soap and water). Rinse with clear warm water, and allow to thoroughly dry. Holes and cracks should be patched. The patching material should be built up above the surface of the wall, then after it has hardened, sand it down flush. For larger cracks, use a sharp tool to undercut the plaster so that the crack is narrower at the surface. The patch will then be more firmly anchored. If the old finish is glossy, it is best to lightly sand the entire surface or use the liquid sandpaper to assure a good bond for the new paint. Before application of paint, thoroughly dust the surface

with a lint-free cloth, but preferably a "tack cloth", a synthetically treated cloth which repels dust.

A wallpapered surface may be painted over, provided it is in good condition and originally applied without overlap at the seams. However, first test the colorfastness with water. Colors that run will probably "bleed" up through the paint. In such cases, as well as with all metallic designs, seal the paper with a white or orange shellac. Latex paints act as a good sealer.

Wallpaper that is in poor condition should be removed. Frequent soaking with water that contains a small amount of detergent will loosen the paper so that it may be easily scraped or pulled off. Then scrub the bare wall with warm water, patch if necessary, and allow to thoroughly dry.

PREPARING THE PAINT

All paint should be thoroughly stirred and mixed to a uniform consistency. This is best accomplished by pouring off the thin liquid (or about one-half) into another container, then stir the remaining paint until the pigment at the bottom is uniformly worked in. Then stir in the other paint gradually until the original container is filled. Do not add thinner unless it is directed on the label. Finally, pour some paint into a suitable container, and you are ready to start painting.

APPLYING THE PAINT

Paint the ceiling first. By arranging a plank between two step-ladders you will have a high platform from which to work. Start in a corner closest to the best source of light so that streaks and missed spots may easily be seen.

If using a brush, apply the paint in a strip about two to three feet wide across the shortest dimension of the ceiling. Use curving, random strokes, gradually lifting the brush as a stroke is completed. Each brush full should begin about 6 inches ahead of the last one. Work back towards the area already painted. Finally, brush lightly to smooth the paint.

Always plan to paint an entire ceiling or wall area so that you will be overlapping a wet edge.

If you prefer a roller, apply the paint in a strip 3 to 4 feet wide, using cross strokes to assure an even application. Finish each roller-full with strokes all going in the same direction. Use a small brush for corners and around woodwork.

To paint a wall, start at the top and paint a strip about 2 feet wide down to the baseboard. Return to the top and repeat, allowing for a slight overlap. Don't go back over paint to eliminate brush marks.

Finally, if you find you can't possibly complete the entire room during one session, finish at a corner to avoid lap marks.

Expert Help With

INTERIOR DESIGN

By AGNES ROGERS, A. I. D.

For the ultimate in interior design for your home you should consider consultation with a professional interior decorator. He is the design expert for every phase of decorating. And the great variety of specialized problems brought to him by clients requires the discipline of high educational standards.

You may feel quite competent to do your own decorating. Your taste may be excellent, and you may know just the effect you wish to achieve. But because you are not active in the field of decorating you are probably unfamiliar with the sources of supply. Further, your knowledge and skill in coping with particular problems is limited.

Consider the vast number of suppliers, brands, styles and colors involved. There are standard and highly specialized fabrics, floor and wall coverings, furniture, lighting fixtures, lamps, accessories and other furnishings to consider. The interior designer is prepared by training and experience to coordinate all these, and to design new forms as indicated by the requirements of the job. In addition, he knows how and where to execute them.

There are several satisfactory ways



Photos courtesy of Armstrong Information Service

When bedroom at the left was remodeled, its decorative elements were grouped about the cheerful old fireplace. On the floor, a "seamless" sheet flooring of vinyl plastic helps ensure easy maintenance. At the right, artistic interior decoration is demonstrated by treatment of stairway, floor, fireplace and furniture setting

of choosing a designer. First, and most reliable, is through the recommendation of another satisfied customer. Second, a dealer or supplier in the field of home furnishings could probably suggest a good firm. Finally, if you are unable to follow the first two suggestions, try discussing your requirements with several designers. On the basis of their apparent ability to offer complete satisfaction, make your own choice.

In the case of a limited budget we suggest first that an over-all plan be agreed upon. Then the job may be completed in stages as your budget permits.

This method insures against wasteful, haphazard selections, and assures a well-integrated, charming end result.

Before contacting an interior designer you should be fully prepared so that an efficient consultation is possible. You should be able to reasonably impart your requirements, tastes and budget. Be ready for a frank discussion of any problem area.

During the consultation it is the designer's responsibility to interpret your desires within the framework of good judgment and good taste. He will then explain not only his plan for putting your ideas into action, but his method of operation, fees, and financial arrangements. A consultation fee may be charged, but if an order follows, this fee will be absorbed.

A fee is usually charged for extra services, such as the supervision of painting or other contractors. Further, you may expect to pay the retail price of furnishings purchased, with the designer making his profit on the sale.

The employment of an interior designer has long been thought by many to be reserved for the "upper crust." But, actually, fees are surprisingly reasonable.

When viewed in the light of comfort, satisfaction, eye-appeal, and livability of your home, the employment of a professional designer becomes an inviting consideration... even for the economy-minded

YOUR FURNITURE BUDGET

When making up your furniture budget, plan to spend more for those pieces which are scheduled for long, hard use. Furniture which will be less frequently used, or will be in the home only temporarily should be relatively inexpensive purchases.

It is particularly wise to pick the highest quality you can afford in upholstered pieces because hidden inner workmanship is difficult to evaluate. By selecting a quality piece through a reliable dealer you are assured of durable construction and long-lasting satisfaction.

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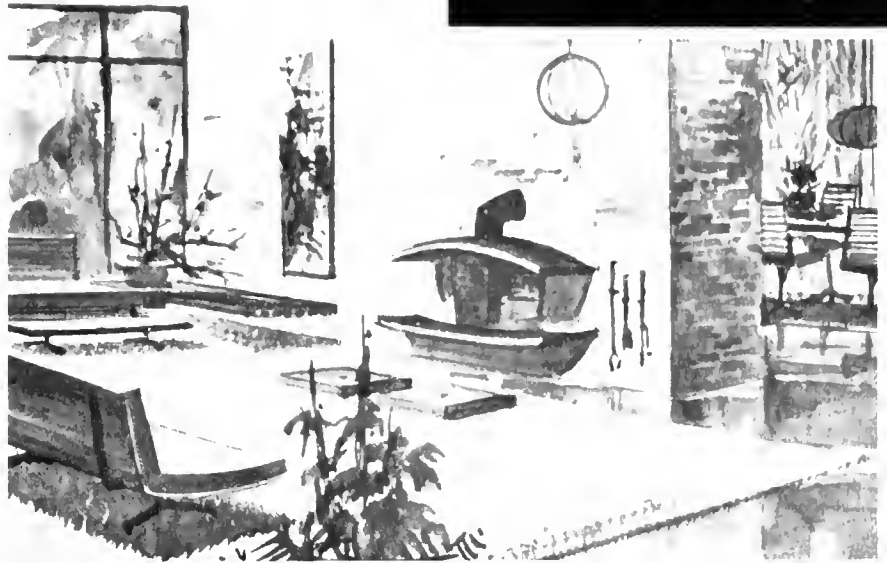
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Well known, widely advertised brands have a fairly measurable value, and they generally constitute a good investment. To say that the well known brands are the only good values available, however, would be far from the truth and would seriously limit you in your selection.

On the other hand, though, buying an unknown brand places you at the mercy of the store or the salesman, and when you are unfamiliar with both, you're living dangerously. A simple rule would then seem to be: know the brand, know the store, or know the salesman. Unfortunately, we all know that it isn't quite that simple.

All this may seem to be painting a pretty dark picture of the furniture business. In reality, it's nowhere near as bad as it looks. Before we tell you some of the ways you can avoid disappointment and purchase home furnishings with confidence, let us point out a few surprising facts that should help to put your mind at ease.



BE AN INFORMED FURNITURE BUYER

By ED PEWTERS

We think it's important to call your attention to a recent U. S. Department of Labor Consumer Price Index report on the increases in prices over the last ten years, using 1947-1949 prices as a base. Automobiles in that period increased 32.4% in price, food 20.8%, clothing 30.1%, public transit fares 98.3%, haircuts 62%, cigarettes 33.8%, and the list goes on and on. Furniture prices, however, during that period increased only 7%, indicating that better methods of production and distribution and the highly competitive nature of the furniture industry is giving you far better values today than ever before.

Another false notion most people have regarding furniture stores is that they are a big markup, big profit operation. Actually, in recent years, the typical, well-run furniture store has averaged nationally around 3% net profit. And as a matter of pure comparison, a good, well-constructed davenport costs far less today than the front seat of your family car, which, incidentally, is usually covered immediately for protection, a precaution rarely accorded to the sofa in your living room.

How Can I Tell a Good Value?

As the ultimate consumer, you have all these points in your favor, but they are, after all, only averages. Your job is to determine what is a good value and what is not. To do that, you must first know what purpose you wish your furniture to serve. Property, for instance, is almost always bought with future resale in mind. Automobiles are always bought with eventual

trade-in value in mind. Furniture, however, is normally bought with permanence in mind. Rarely do people expect to sell their furniture two, three, or even four years after they buy it. Even rarer are those that do.

A second consideration is whether you want style or utility. Highly styled merchandise is frequently less durable than solid, traditional styles. Having decided what you want, and what you would like it to do for you, you are ready to select the merchandise and the store with which you want to do business.

It is easy to say, deal with a reputable store, but how can you tell? There are several ways. With competition what it is, a furniture store can not remain in business these days if its prices are not pretty much in line with the average. Some stores offer more service than others, and they charge for it. If you want or expect extras, you must be willing to pay for them. But a store that has been in business five or ten years or more has made some form of impression on the public. That impression is important. If you are new in town or unaware of the furniture picture, talk with friends, neighbors, or business associates. Everyone buys furniture at one time or another. The experience they have had is valuable to you.

Where Can I Get Competent Advice?

Call the Better Business Bureau. A reputable furniture store will rarely allow a complaint to get that far and will have no record. A record of minor complaints, petty though they may be, is a strong indication that the store is

not interested in the good will of its customers.

Don't be misled by extravagant advertising claims. The better stores do not have to go to extremes to lure customers to their stores. Other stores, by their advertising, seem to be inviting you to take advantage of their stupidity, offering you tremendous discounts forced upon them by their buying mistakes or overloaded warehouses. Don't count on outwitting them. They are smarter than they look. The noisier the advertising, the wiser you should be.

You can save money by shopping a number of stores, but here is where you are at a distinct disadvantage. It is not possible for you to compare accurately the many similar lines of furniture or floor coverings you will see. You may simply become confused, even if you take notes. If the salesman decides you are just plain shopping, he may merely try for a sale, instead of making a steady customer of you. In other words, while you are shopping for furniture, shop for a salesman and a store that appear to be the most informative and helpful. A good store thrives on repeat business. In order to insure yours, they will try to give you the most value for your money. The lowest price is not often the best value, as many sad victims have discovered.

How Honest Are Comparative Prices?

One point more. Don't use comparative price advertising as your basis for a purchase. The "was formerly \$ " price is too easily manipulated—and, therefore, unreliable as a true measure of value.

KNOW THE MAJOR FURNITURE STYLES

Furniture styles are rich in history and tradition. They reflect the desires of the people for whom they were created, as well as the social conditions of the time. That accounts for the wide selection of styles available to you today.

You may wish to use just one style in creating a particular decor in your home, or you may wish to mix styles for the sake of greater freedom of choice and individuality. However, in mixing styles it is best to use pieces that are similar in scale, line and form — those which reflect the same spirit or mood.

18TH CENTURY (TRADITIONAL)

The composite style known as Eighteenth Century is made up of designs of some of the most famous creators of furniture. Among them are Chippendale, the Adams Brothers, Duncan Phyfe, Hepplewhite and Sheraton.

General characteristics: Slender, almost fragile lines. In general, curves are subtle, giving an air of lightness. Construction was excellent. Some Chippendale pieces were more bulky in appearance. Mahogany was most often used.

Chippendale — Superb artistry and detail in carving. Borrowed most of his designs, but improved upon his sources. Major influences were Queen Anne, early Georgian, Louis XV of France, Chinese, Gothic.

Duncan Phyfe — Elegant formality, with graceful curves. Characteristics include pedestal base for tables, lyre motif, flared legs with outward sweep, cornucopia legs on sofas. Phyfe later developed the Federal American style, incorporating ideas from the Directoire and Empire styles of France. He adopted the Roman curule with paw feet, patriotic motifs, such as the eagle, and other decorative carvings.

Hepplewhite — Slender and delicate in appearance, but well-constructed. Feminine and refined. Chairs feature straight front legs with spade foot, while back legs are raked. Backs were often oval or shield shaped. Sofas featured out-turned arms. Sideboards had concave corners, bombe centers. Developed Pembroke table with circular drop leaves.

Sheraton — Similar to Hepplewhite, except in detail. Sideboards have convex corner construction. Used delicate inlays, veneers and restrained carvings. Devised the double duty Pembroke table, as well as the roll-top desk and secret compartmented desks. Straight lines stressed.

PROVINCIAL (FRENCH & ITALIAN)

French Provincial — Although there are two types — the city and the country — the former has greater popularity because of its more suave, rich and more formal styling. The 18th Century copies of 15th and 16th Century pieces inspired the French Provincial style

of today. Lines were straight or gently curving, with scalloped edges and delicate cabriole legs lending a feminine touch. Chief use today is in the bedroom, but some dining room pieces are seen. Woods used were walnut, oak, chestnut, ash, poplar, beech, birch and fruitwoods.

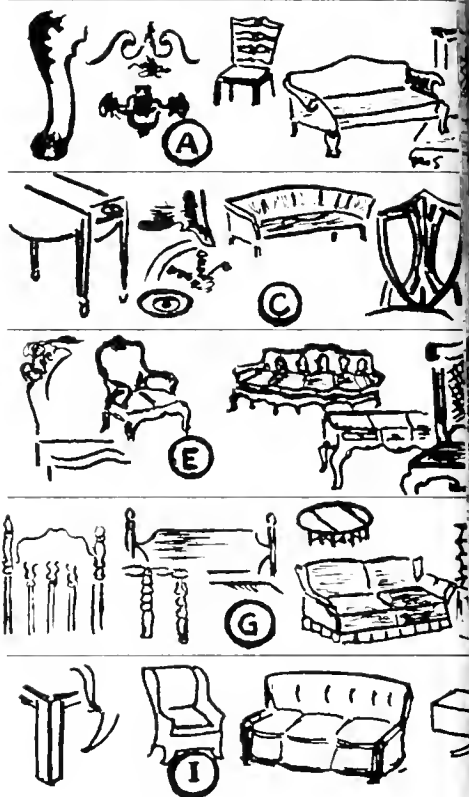
Italian Provincial — Inspired by French Provincial, but employing darker woods, richer details and box-like outlines. Rich in detail and decoration. Upholstery fabrics are usually bright.

VICTORIAN


Victorian furniture emphasises the respectability, primness and hominess associated with the reign of Queen Victoria (1837 - 1901). The style achieved an enthusiastic response in America. As the style evolved, the more cumbersome and oversized pieces disappeared, and what was good was gradually improved upon. What remains of the style is usually quaint and homey, with occasional feminine overtones.

Straight lines were introduced, but many of the sweeping curves remained, as did the cabriole leg. The sombre tone produced by dark upholstery against dark woods has been replaced by lighter wood and fabrics. Ornamentation has been restrained and simplified, but still includes scrolls, flowers, anchors, tridents, classical figures, etc.

- (A) CHIPPENDALE
- (B) DUNCAN PHYFE
- (C) HEPPLEWHITE
- (D) SHERATON
- (E) FRENCH PROVINCIAL



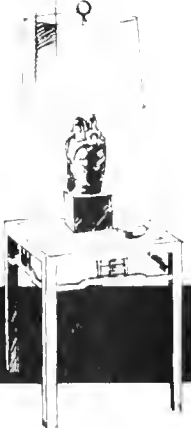
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- (F) VICTORIAN
- (G) COLONIAL
- (H) ITALIAN PROVINCIAL
- (I) CONTEMPORARY
- (J) MODERN

Furniture Styles (Continued)

COLONIAL

Early Colonial (1620 - 1725) — Designs produced by the early New England colonists were largely responsible for the modern version of colonial furniture. The colonists, seeking functionalism and simplicity, patterned their pieces after styles which were popular among the middle classes of England. The furniture was made by carpenters who lacked the tools and skill for ornamentation or detail.

Beauty of appearance gave way to usefulness and sturdiness. The lines are straight and simple. Woods most frequently used were native maple, walnut, birch, elm and fruit.

Variations were typical. For instance, the English Windsor chair was produced in combback, fanback and hoopback variations. Banister and ladder back chairs were also popular, as were the splatback and fiddle-back chairs. The cabriole leg adopted a club foot and a new name — bandy leg.

Tables were varied. Favorite Colonial pieces were the drop leaf, gate-leg table and the butterfly table (its drop leaves are supported by a butterfly-shaped piece of wood).

Late Colonial (1725 - 1790) — This period produced little change in the basic Colonial style. Reproductions of English and French styles were common. Stubbier legs and higher backs emerged. The four poster bed with elaborate turning became popular.

CONTEMPORARY

Contemporary furniture cannot be identified as a distinct style. Rather, it is an up-to-date adaption of a successful style of the past. Modern materials and fabrics, plus added comfort and beauty have preserved the best in design for a modern application. Usually, size is reduced, and ornamentation is removed. Legs, in particular, have been simplified.

In spirit, it ranges from formal to informal, with adaptability to suit any modern home. In general, contemporary furniture is light in scale, has clean, simple lines, sometimes combined with graceful curves. Walnut predominates, but many bleached, pickled and lacquered woods are used.

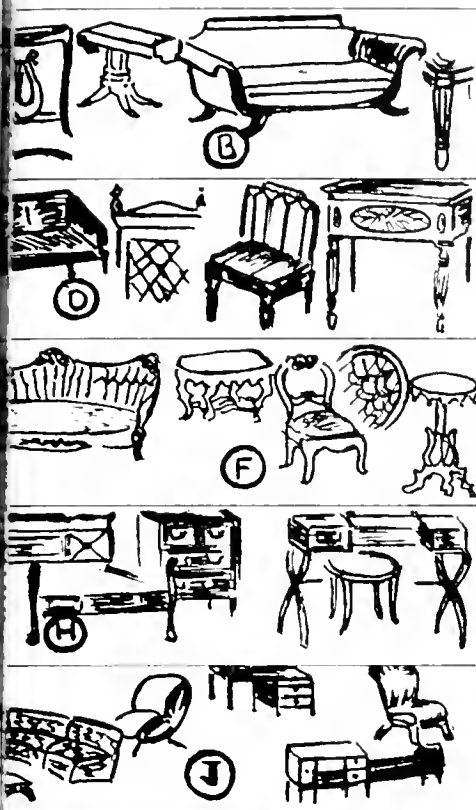
MODERN

In all modern furniture, comfort and functionality is all-important. Intended use dictates the design. Thus, many experimental forms are seen.

Chairs have assumed new shapes, designed to fit and better support human contours. Unit pieces in chairs and sofas have emerged as functionalism demands.

Foam rubber, as well as webbing are used extensively. New fabrics, featuring easy care, durability, eye appeal and low cost have emerged.

This style is in constant change. At present, low shapes, horizontal lines and nubby fabrics are in vogue.



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FURNITURE SELECTION GUIDE

Furniture falls into two basic groupings, *wooden furniture* (sometimes referred to as "case goods") and *upholstered furniture*. Careful buying calls for at least a basic knowledge of the woods, method of construction, materials used, type of finish, etc.

WOODEN FURNITURE

The framework of wooden furniture is generally solid wood. Metal and plastics are also becoming more popular, and are used to suit specific construction and style purposes. Front, back, sides and top may be either solid or veneer woods, metal or plastic.

● **Solid wood** — Wood of at least one-fourth inch in thickness qualifies as solid wood construction. Chief advantages are the ease of repair, refinishing and carving. Disadvantage is warping, except when overcome by manufacturing techniques.

● **Veneered wood** — A veneer is produced by gluing a thin sheet of fine wood over a less expensive core of plywood. Because each layer runs at right angles to the adjoining layer, strength and stability are produced. Advantages are strong, lightweight construction, and flexibility of surface patterns.

How can you recognize well constructed furniture? Look for these signs:

Joints — Strong joints are important. Mortise and tenon or double dowel joining are most advisable. Some good construction features screw joints, reinforced with glue. If metal construction, look for screwed, bolted, riveted or welded joints.

Corners — Look under pieces such as tables and chairs to see if corner blocks are used. They should be screwed in place for added reinforcement.

Exterior — Finish should have well matched, uniformly patterned woods. If metal is used, it should be rust-resistant or well enameled.

Interior — They should be sanded smooth, or may be waxed or lacquered. If the piece of furniture is to stand free from a wall, make sure its back surface matches the front or top surface.

Back panels — Pieces such as dressers and chests should have three-ply veneer back panels securely attached to back posts.

Hardware — Size and type of hardware should be in keeping with decor of piece. It should be substantial and appropriate for its intended use. Leg construction should be such that floors will not be scratched.

Drawers — They are easily checked, and are often a guide to quality of construction. Drawers should slide smoothly and fit snugly. Joints should be sturdy. Best construction features

dove-tail joinings in all corners and, possibly, corner blocks. Drawer bottoms should be smooth hardboard or plastic, and fitted into grooves in the side and back panels. Fiberboard or plywood panels may be used between drawers for added strength and for dust protection.

UPHOLSTERED FURNITURE

When shopping for upholstered furniture it is particularly important to choose the quality, style and type which will give you maximum service and comfort. Try out each piece to assure that it measures up to your standards.

Look for these features:

Frame — Kiln dried hardwood is best. Avoid knots and imperfections. Oak, maple and birch offer excellent durability. Look at all joints for secure fastening. For added strength they should have screwed-in corner blocks or metal tie-plates.

Seat Base — The seat base may be made of one or more materials, depending on its size, intended use and quality of construction. If coil springs are used, look for at least eight (but preferably twelve) coil springs in the seat. Arched steel bands or flat zigzag springs provide good support, also, and are more buoyant than rubber, steel, fabric or plastic webbing.

Inner cushion — Filling material will not seep through if covered and well supported by either a strong fabric

(Continued on next page)

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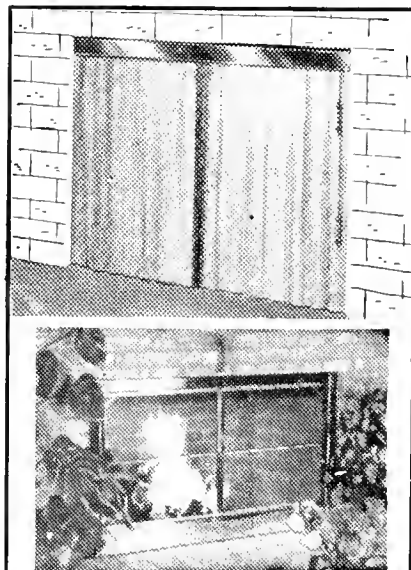
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such as burlap (8 to 12 oz.), or a cotton felt pad or a rubberized sisal pad stretched over the springs and securely tacked to the frame. A good filler material, generously used, adds comfort and softness to fine upholstered furniture. Good materials include curled horsehair (resilient, durable, odorless), foam rubber (buoyant and durable, but should be about 3 to 4 inches thick when used alone, or 2 inches thick when over springs), rubberized hair or moss and cotton felt (fair resilience) and down and feathers (combines softness with firmness, and used in higher priced furniture).

Outer covering — Look for smooth, well-tailored appearance. Strong seams and well-placed pattern (if applicable) are important. If cushions are separate, look under them to see if there is a wide band of upholstery fabric at the front of and around the edges of the seat platform.

The upholstery fabric itself may be of either a *flat weave* or a *pile weave*. Flat weaves include brocade, cretonne, damask, sailcloth, etc. Pile weaves include boucle, frieze, plush, velvet, etc. Either should be firmly woven and strong at the seams. New *synthetic fabrics* are generally very durable, and require little care. You may prefer *leather upholstery* because of its luxurious and durable qualities, but its comparative cost is higher than the other materials mentioned. The fabric you choose should be durable, soil-resistant, and in decor with other furnishings.

HELPFUL HINTS ON FURNITURE CARE

(Courtesy of Doer, 6th Ave. Furniture)

DENTS IN FURNITURE: Wet the part with warm water, double a piece of brown paper five or six times, soak the paper in warm water and lay upon dent. Apply a warm (not hot) iron until the moisture has evaporated. If the bruises are not gone, repeat process. If the surface is not broken the dent will disappear.

FOGGY APPEARANCE: If highly polished surfaces grow foggy, rub surface with cloth dipped in vinegar solution (1 tablespoon of vinegar to 1 qt. of water). Rub with the grain until surface is thoroughly dry.

WHITE SPOTS ON A WAXED FINISH: Sponge with turpentine and apply fresh wax when fumes have evaporated.

Reverse loose-type cushions every few days to reduce wear and to maintain smooth tailored appearance. This is important with cushions of foam rubber.

Never allow cats, dogs or other pets to sit on your upholstered furniture. Animal's claws and other sharp objects will cause snagging of fabrics.

STAIN REMOVAL

- **BLOOD STAINS:** Use clean cloth dampened with cold water.
- **FRUIT STAINS AND ICE**

CREAM: Rub stain with clean cloth and hot water. When it is dry rub it lightly with a good spot remover.

● **GREASE AND OIL STAINS:** Scrape loose grease from upholstery with a dull knife. Dampen cloth with cleaner and rub gently back and forth in straight lines carrying strokes well beyond the spot in both directions.

● **COSMETICS:** Use cleaning solution and a white blotter.

● **CHEWING GUM OR TAR:** Moisten with cleaner and scrape off with a dull knife.

● **URINE:** Sponge stain with mild soap suds. Clean with cloth dipped in cold water, then apply solution of one part ammonia and five parts water. Wipe with clean white cloth.

● **CANDY STAINS:** All candy stains except chocolate can be removed with hot water. For chocolate stains, rub lightly with cloth dipped in luke warm water, then sponge with a second cloth dipped in a cleaner.

● **ILLNESS (NAUSEA):** Sponge with clean cold water, then with luke warm soapy water. Rinse with cold water.

● **PLASTICS & CODAGRAN:** Clean with mild soap and clean water. Dry with clean cloth. Do not apply cleaning fluid of any nature to this type of material.



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LIVING ROOM FURNITURE

By OSCAR MAGNUSON

Not very often in life do you have the exciting and interesting experience of selecting and purchasing living room furniture. Perhaps the average family selects new furniture three or four times in the span of their life. So this adventure demands some forethought and study. It is an investment in life that is well worth meditation, for it can pay worthwhile rewards in happiness and comfort for years to come.

In selecting upholstered furniture there are many things to be considered, but these are some of the prime factors to evaluate:

Prime Considerations

The reputation and integrity of the retail firm or firms in your shopping tour. Reliability, service and inventory of merchandise are three very salient factors in choosing the firm from which to begin your considerations. Price is not one of the most important factors as might be expected. The reason is contained in the old saying, "You get just what you pay for."

No matter where you purchase the furniture, your selection must, of course, come within your ability to pay. However, no matter where you find the proper priced merchandise,

first be sure the firm has the reliability or integrity to substantiate the value offered, and also that they can render the service required to make the fulfillment of the merchandise a reality. The best appearing value in a living room suite having improper or poor construction, in due time, scuttles all sense of value or bargain. The firm who appears to be slightly higher may offer far more service which, in the long run, will provide more utility from the living room suite.

Service not only means the rendering of necessary minor adjustments after the merchandise has been delivered, but the actual performance of the sales person in devoting professional advice in assisting you to make a proper selection. Willingness and ability to understand the needs and requirements necessary to furnish your living room in a well balanced, comfortable and interesting manner, are both a part of the value considerations to be made. Much thought should be given to proper layout and planning to the furnishing of your living room. This is a service that requires many years of experience in order to be proficient.

A properly furnished living room can increase the utility, enhance the

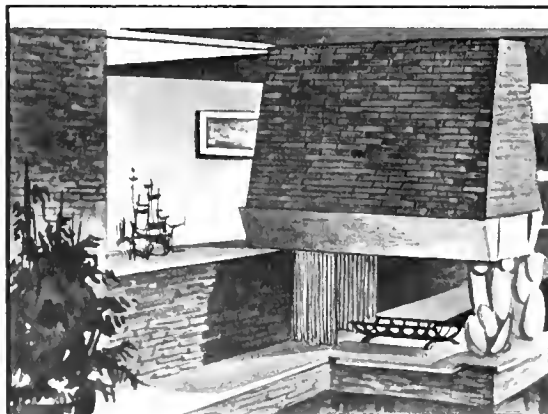
beauty, or reduce the emptiness, while in contrast, an improperly furnished room can crowd the space beyond comfortable existence. All these and many more reasons, too numerous to mention here, are evidences of the need for careful consideration in choosing the firm best equipped to give valuable performance. Thus (1) weigh reliability, (2) be mindful of the service, and (3) be certain your choice fits your needs.

Your selection of furniture should be from a comprehensive stock, or from the sources readily available. Your chances of real happiness and satisfaction would most likely be derived from a host of models, styles, fabrics and qualities. Not just one price bracket, but a large selection and range so you can make a true comparison. "All things in life are by comparison," therefore, the factor of a good choice would come more readily from a wide and varied selection, than from a minimum selection.

Factors in Selection

Three main factors should be considered in the actual selection of the product. First, choose a product which is, at least somewhat, known to give good performance and have a reliable record. Reputation of the product should be a prime consideration.

Second, style today is a very important factor. Style sets the stage for fabric, color and price. With architecture changing from excessiveness



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to simplicity, styling is an important consideration in furnishing your home. It must be accurate, balanced and appealing to the eye. Tailoring is the main essence in the developing of good style. Immaculateness, simplicity and utility create the beauty in design. Unnecessary filigree distorts the intent, and burdens the product, while simplicity enhances. Cleanliness in design is all important. Americans have become very conscious of design and style in all their purchases, and in furniture the housewife is really very discriminating. She realizes the vast difference between the heavy built to the floor, bulky arm, balloon cushion furniture of the past and today's truly fine line or slim line, with its flat foam rubber cushions, narrow arms and small tapered legs, creating a modern airy, light, neat and tailored appearance. Since the trend in architecture sets the pace as to type and style of furniture, today's furniture is bound to be vastly different from former years.

With lower ceilings, more windows and less wall space, it is necessary to have more versatility in furnishings. So the style trend is an extremely important factor to bear in mind.

Next, and not the least, is the fabric. The amount of wear a fabric will withstand is prominent in your mind when selecting covers. Wear potential, style and color are all factors in the choice.

The better the quality fabric chosen the less costly is the over-all picture. Poor fabrics are the most expensive, because of the necessity of replacement within a short period of time. The price of the furniture is considerably dependent upon the quality of fabric used. Approximately one third of the total price is in the fabric portion of the furniture, therefore, for

CARE OF UPHOLSTERED FURNITURE

Vacuuming and brushing of your upholstered furniture is essential, and the more often you clean it, the longer it will last. Dirt which has been vacuumed out of furniture, if viewed under a microscope, will be revealed as tiny sharp cutting edges which cause abrasive wear of the fabric.

Proper and frequent cleaning will prolong the life of your furniture.

Certain fabrics respond well to a stiff brush for removal of surface dirt. Use

a few dollars additional a better quality fabric can create a longer life in the other two thirds of the furniture. This additional cost, spread over many years, is very nominal and is hardly noticed in the monthly payments on furniture. The better quality fabrics invariably will hold their colors much longer. They, as a rule, will stand cleaning more readily, and will give longer service.

The beauty of the furniture is much greater with a good quality fabric. Two covers of proven quality are the mohair and nylons. The greater the quantity of mohair or nylon the fabric contains, the more durable the fabric and, of course, the more costly. However, a good slogan to remember in the choosing of upholstered furniture is, "The quality is long remembered after the price is forgotten."

a stiff brush only on such fabrics as strong homespun fabrics, wool, glazed surface materials, firmly woven cloths, and on some pile fabrics. Never use a stiff brush on damask, brocade or other materials with a loose-woven thread. Brush needlework with a soft bristle brush.

Brushing and vacuuming keeps down the everyday soil, but at times a more thorough cleaning is necessary. For instance, the back cushion of chairs and sofas may become stained by the grease from a man's hair. This, and similar oily stains may be removed with one of the liquid cleaners on the market, or by using a cellulose sponge moistened with carbon tetrachloride or some noncombustible cleaner. Soiled furniture arms may require the same treatment. When using a liquid cleaner, always work with the grain of the fabric, and feather the strokes out lightly around the area cleaned.

During the seasonal cleaning, the entire upholstered piece should be thoroughly worked over. Or, if spot removal reveals generally soiled fabric, you should proceed to clean all of the fabric.

Spot and stain removal should be done as soon as possible after soiling. Some spots which have a chance to set act as permanent dyes, sometimes necessitating a patch or a whole new section of fabric.

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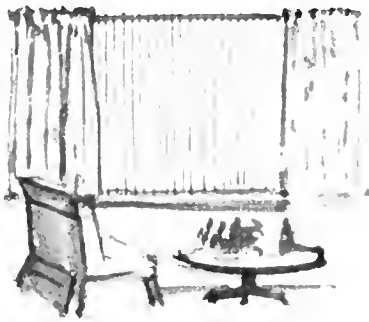
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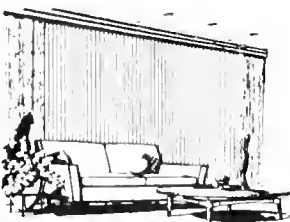
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A GUIDE TO WISE FABRIC SELECTION

By Doris Brockway

Ass't Prof. Home Economics

University of Washington

Buying fabrics for the home today is a major undertaking and requires a wise and wary buyer to cope with the enticing possibilities in our present market. These exciting fabrics offered for your consumer dollars vary as widely in serviceability as they do in esthetic values. We are faced with a choice to be made from textiles fabricated of no less than 29 fibers, 24 of them man-made, and more new ones coming. These choices multiplied by variations in blends increase the selection astronomically.

Fabrics should be considered a part of the architectural scheme. Their mobility makes them contrast pleasantly with flat, hard, rough or smooth surfaces. They may be required to filter light softly or to shut it out, to add warmth and comfort to a room, to deaden sound, to divide space or to enhance form and shape and to provide the color which gives the home its particular personality. This suggests that in addition to fiber considerations the performance of fabric structures, finishes and color complicate the problem of selection still further. What guide posts can the average homemaker make use of to lead her to satisfactory selections? At the top of the list should be an inquiring mind and a penchant to get at the facts, regardless of advertising claims.

Certain basic considerations should always be faced objectively first:

1. *Exposure.* Suppose the exposure is a southern one, windows all across the side, and the sun streams into the room. Here the effect of sun and light on color and fiber deterioration are of major importance to curtains or draperies. Fiber deterioration is less a factor in upholstery or carpets, but should not be ruled out if exposure is excessive.

2. *Atmospheric conditions.* If the home is located near an industrial area, the air may carry soot, soil and gases from waste combustion products which cause "tendering" or loss of strength in certain fabrics. The more humid the atmosphere the more rapid the deterioration. In this situation, choices should be limited to fibers showing the greatest resistance to sun, light and atmospheric conditions.

3. *Heat and moisture,* from sources other than sun and normal humidity. Curtains hang in contact with glass or walls, both of which under certain conditions condense moisture from the air,

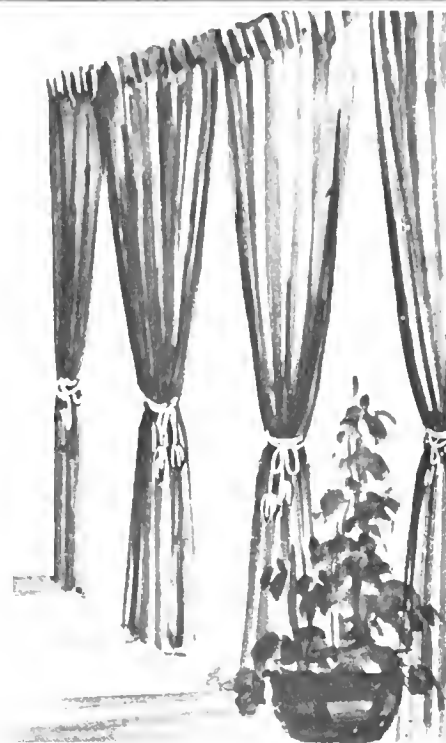
Fabrics absorb this moisture, affecting the dimensional stability (tendency to shrink or sag) of certain fibers. Heat from registers or radiators in direct line or contact with curtains has an adverse effect on the strength of others. These factors together may accelerate deterioration developing from exposure to light and adverse atmospheric conditions.

4. *Fabric structure.* If the choice involves sheer casements, the strength of the fiber and its resistance to light and atmospheric conditions takes on added significance. In a heavier drapery, perhaps lined, the range of fiber choices increases because the greater strength of the fabric due to its structure is a compensating factor and is less quickly damaged by these conditions.

5. *Dyes and pigmentation.* Certain dyes, ordinarily in printed fabrics, with colors in the yellow and orange range, or hues which contain these colors, may be subject to a chemical change in the presence of the sun's rays causing "tendering" of the fabric in only these color areas. This weakness rarely shows up until the curtain is dry cleaned or laundered. The cellulosic fibers are particularly susceptible to this type of damage. Bright or lustrous fibers or yarns (chiefly man-made) are more resistant to sun damage than dull ones. Unfortunately the dull surfaces usually have more esthetic appeal to the average consumer. When man-made fibers are manufactured the degree of brightness or dullness can easily be controlled by withholding or adding a delustering pigment to the spinning solution. The rate of deterioration in susceptible fabric is increased in proportion to the increase in the amount of delustering agent added. The susceptible fibers are chiefly rayons, nylons, acetates and Arnel.

A study of the following fiber chart will identify those fibers whose individual strengths or weaknesses affect their usefulness for certain purposes. The factors highlighted in this chart have particular significance for curtains and draperies because these uses are exposed to a wider range of degrading factors. In March, 1960, a new fiber labeling law goes into effect. This law will require the identification of the fiber content of textile merchandise sold for apparel or household purposes. The label must include the

Drapes, Blinds and Upholstery



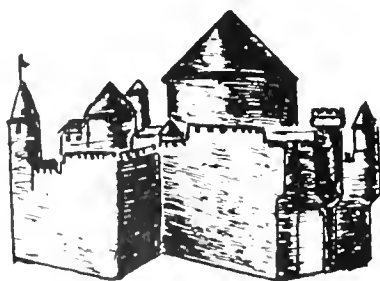
brand names of the fiber or fibers used and the generic or family name. The reader will do well to play close attention to the family name headings under which the fibers are listed. As new fibers are introduced, the generic grouping will help the consumer to recognize certain characteristics which are common to this group. Thus the brand name has less importance.

A few additional points should be made concerning the selection of curtains and draperies. These fabrics should be chosen with an eye for certain qualities in construction and for guarantees given. A loosely woven fabric is more apt to shrink than one which is closely constructed. Therefore shrinkage control guarantees assume more importance. Two per cent shrinkage in 90 inches of fabric means a loss of more than an inch and a half in length. Be sure to inquire about these guarantees.

Colorfastness to light in curtains, upholstery, and carpeting (in that order) assumes a place of importance in your list of "musts." Fabrics indicating the use of Vat dyes are generally very reliable, and man-made fibers which have been solution-dyed are relatively free of fading difficulties. The importance of colorfastness to light is in proportion to the degree of exposure to light expected in use.

FACTORS AFFECTING CASEMENTS OR DRAPERY FABRICS

<i>FIBERS</i>	<i>Resistance to sun's rays, strong light and adverse atmospheric conditions.</i>	<i>Resistance to heat from central heating systems and moisture in the air.</i>	<i>Variables due to fabric weight and structure.</i>	<i>Other considerations</i>
CELLULOSE FIBERS natural COTTON	Loses strength.	Highly resistant to degradation. Gains strength in presence of increasing moisture.	Sheers—short life. As density increases, well-balanced structure gains resistance to degrading factors.	Look for guarantees of colorfastness to light and shrinkage control.
LINEN	Because linen is twice as strong as cotton loss of strength is very slow.	Same as cotton.	Because of greater initial strength wear life is very satisfactory.	Dry cleaning recommended. Look for guarantees on colorfastness to light.
Man-made VISCOSE RAYON and BEMBERG RAYON	Loses strength.	Less resistant than cotton to degradation from heat. Loses considerable strength when wet. Excess moisture in air may cause shrinkage or sagging depending on weight of curtain.	Sheers—short life. Heavier well-constructed fabrics have longer life. Dimensional instability may be a problem.	Same as cotton. Dry cleaning recommended because of shrinkage problem. Solution-dyed fibers fade little or none; clear, bright colors.
FORTISAN	Loses strength. Because initial strength is greater than rayon, degradation does not show up as quickly.	Good resistance to heat. Good dimensional stability in presence of moisture.	Available in sheers only—either 100 per cent or in lengthwise direction (warp) only with filling (crosswise) of silk, rayon, cotton, and other fibers.	Wear life depends on fiber combinations. Dry cleaning usually recommended.
PROTEIN FIBERS SILK	Loses strength rapidly.	Heat has adverse effect on strength. Moisture may cause staining.	Sheers—very short life. Heavier fabrics, lined, may give satisfactory service except on exposed edges.	Dry cleaning essential.
MOHAIR	Good resistance to degradation.	Good resistance to heat and moisture.	Often combined with linen or rayon, etc., in casement-type fabrics.	Drapes beautifully—Wears very well. Must be dry cleaned.
CELLULOSE ESTERS ACETATE	Degraded by sun and light. More resistant than cellulose fibers to adverse atmospheric conditions	Similar to rayons.	Similar to rayons.	Solution dyed fibers—fade little or none. Usually combined or blended with other fibers. Drapes beautifully. Dry cleaning recommended.
ARNEL	Same as Acetate.	Highly resistant to heat. Better dimensional stability in presence of moisture.	Similar to acetate. Improved dimensional stability.	Has good wrinkle resistance. Dry cleaning recommended—but can be washed—and ironed while dry.



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SELECTION OF UPHOLSTERY FABRICS By DORIS BROCKWAY

In the selection of upholstery, the consumer's quest is somewhat less complicated, at least in the variety of fibers for this purpose. Those most commonly encountered are cotton, linen, silk, mohair, Viscose rayon, acetate, nylon, some acrylic fibers and Saran, and blends of these fibers. The essential factors in fabrics for upholstery uses concern the ability to withstand wear or friction, the ability to maintain a good appearance, and the ease with which they may be cleaned when soiled or stained. Cottons and rayons make up a large percentage of

these fabrics because of their interesting color ranges, their durable qualities when properly constructed, and a price advantage. Special finishes have helped these cellulosic fibers to resist soiling and staining. One of the newest and most promising types of such finishes is called "Scotchgard" and is guaranteed to resist oil as well as water-borne stains. A close, well-balanced construction with a moderate amount of flexibility in a bias direction makes the best wearing upholstery fabric. Coupled with certain inherent strengths of some fibers, one may get

exceptional wearing qualities. Fibers that give this added wear are mohair, nylon and Saran. Mohair has the resilience and toughness of wool; nylon has exceptional resistance to abrasion, but sometimes has more sheen than is desirable. This factor is being overcome by better fabric design. Saran has exceptional resistance to soiling or staining because it is impervious to moisture. Its wearing quality will be good if the fabric is properly designed. Be sure to ask your upholsterer about it.

POLYAMIDE FIBERS NYLON	Loses strength.	Heat may cause yellowing. Moisture has little effect. White may pick up stain.	Sheers of dull yarns—short life. Heavier, of good construction, have satisfactory wear life.	Type of fabric determines washability. Bright yarns wear better than dull.
POLYESTER FIBERS DACRON KODEL MYLAR (metallics) TERYLENE (British and Canadian)	Highly resistant to degradation.	Excellent resistance to heat shrinkage. Is not affected by moisture.	Sheers—excellent wear. Other fabrics of light casement or opaque fabrics usually blended with cotton, linen, silk, rayon, etc.	Sheers wash easily, require very little touching up. Read directions carefully on labels for cleaning blends.
ACRILIC (or part acrylic) ACRILAN CRESLAN DYNEL ORLON VEREL DARVAN ZEFAN	Orlon and Darvan—highly resistant to degradation outdoors as well as indoors. Others—Good resistance to degradation.	Dynel—Sensitive to heat. Shrinkage occurs at 250° F. Verel—Stiffens and discolors at 300° F.	None at present available in sheers. Excellent in wool-like textures. Blended with other fibers.	Dynel and Verel non-flammable, melt. Acrilan, Verel—good carpet fibers—resilient and resistant to crushing. Orlon, Acrilan—blankets, machine washable, warm, light weight.
GLASS FIBERGLAS	Impervious to action of sun's rays or atmospheric conditions.	Unaffected by heat or moisture.	Available in wide variety of handsome textures from sheers to heavy fabrics.	High breaking strength, but low flexing strength. Avoid rubbing against sills, window frames, venetian blinds, or floor. Fireproof.
VINYL DERIVATIVES SARAN	Good resistance to degradation. May darken slightly.	Sensitive to heat—Similar to Dynel. Impervious to moisture.	Available in sheers to heavier textures. May be blended with Dynel.	Fire resistant—Melts but does not burn. Can be vacuumed to clean. Can be washed—cannot be pressed (needs no pressing). Can be dry cleaned—but should be identified for dry cleaner.

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Select the Right Resilient Flooring

Whether for use in the kitchen, the bedroom, the basement or some other room in the home, there's a type of resilient flooring to suit any need.

Smooth-surface flooring materials—including linoleum and plastic types in sheet form, and the tile family of asphalt, rubber, plastic, cork and special kinds — offer home owner and housewife the combined advantages of beauty, convenience and long wear.

The color and design of many, many patterns allows a selection to fit every interior decoration need. Swish-over-lightly cleaning with a dust mop is the only daily care needed for these floors, since they have smooth, lustrous surfaces with no crevices to harbor dirt. Because of their resilience, the floors are comfortable and quiet underfoot.

For all its attractiveness and convenience, resilient flooring is exceptionally durable. Built into every square yard are years and years of wear. If the floor is installed and maintained properly, its clarity of color and sharpness of design will not change significantly during its lifetime.

Quickly Installed

Smooth-surface flooring, either in tile, or sheet form, is installed quickly. A few hours is all the time required to give any residential room a gleaming new floor.

Of all resilient floors, linoleum is perhaps the best known and most popular. It is available in more than a hundred distinctive patterns. Basically, linoleum consists of a mix of oxidized linseed oil, cork and wood "flour," and pigments, bonded to a felt or burlap backing. The mix gives the flooring characteristics of resilience, beauty, and durability; the backing adds to its strength, foot-comfort and noise-deadening qualities. Linoleum's continuous sheet form makes installation possible with a minimum of seams and joints. In addition, it is grease-resistant, so it is one of the best types of flooring for kitchens.

Printed felt-base floor covering, a

"loose-lay" type of rug, should not be confused with true linoleum, which is installed as a permanent floor.

Linoleum can be used on any type of subfloor that is above ground-level. However, it should never be laid over concrete in direct contact with the ground, because the alkaline moisture always present there will deteriorate the flooring.

A second type of sheet, or "seamless," flooring is inlaid vinyl plastic. In this material, as in linoleum, the color and design of the pattern go all the way through to the backing. Printed rugs with a very thin coating of plastic are sometimes advertised as "vinyl plastic floor products." While these serve adequately as temporary, removable floor coverings, they by no means compare in quality or durability with the permanently-installed kind of vinyl sheet goods.

Vinyl sheet flooring of the inlaid type is a high-quality, high-style product for use where appearance is important and a feeling of elegance is desired. It is long wearing, exceptionally smooth, and easy to clean. This greaseproof material has a high resistance to abrasion, and it successfully withstands the harmful effects of hot soapy water, alcohol and alkaline cleansers.

All vinyl flooring in sheet form can be laid on any type of suspended subfloor. And certain kinds—those with a special moisture-resistant backing, called Hydrocord — can be installed anywhere, even in basements and other below-ground areas.

New Underlayment

Recently announced was the development of an air-filled foam underlayment that permits new resilient flooring to be laid over old. Cushion-Eze Underlayment, as this "padding" is called, adds a luxurious springiness to linoleum sheet goods and tile, Corlon vinyl sheet goods and tile, and Linotile, the flooring types with which it is used. When new flooring is installed in an area already surfaced

with a smooth-surface floor, the air-foam underlayment does away with the time, trouble and expense of ripping up the old flooring. When it's installed over a wooden subfloor, it eliminates the need for a plywood or hardboard base that otherwise should be used for best results. Cushion-Eze Underlayment, thus, both simplifies flooring installation and makes the finished floor much more comfortable and quiet to walk upon.

Often Specified

Resilient tiles are being specified more than ever before, for use throughout the home. Their ease of handling and replacement, coupled with their unlimited design possibilities, has accounted largely for this increased popularity. Tiles in special designs have found a functional as well as decorative use; for they can be laid in such a way as to make the floor, and thus the room, appear larger.

Asphalt tile is completely resistant to the moisture and alkali found with grade-level and below-grade floors. This, coupled with its low cost, makes it especially popular for use in basementless homes. Made in a wide variety of patterns, with a number of pre-cut decorative insets also available, asphalt tile is one of the least expensive of all flooring materials. It is not, however, grease-resistant; and asphalt tile is not quite as easy to maintain as other floors.

Another type of flooring that can safely be installed in any area of the home, from attic to cellar, is vinyl-asbestos tile. Smooth, colorful and fire-retardant, vinyl-asbestos floors are favorites for do-it-yourself installation. Some types are made especially for home mechanics, in fact; these tiles can be cut with ordinary scissors, and the flooring adhesive spread with a paint brush. So laying the floor, even fitting tiles at room edges, is quick and easy.

Rubber tile has a smooth, plate-like surface and a smart richness of color.

(Continued on next page)

The Right Resilient Materials (Cont.)

This durable material is reinforced for greater wear and a high rate of recovery from indentation. Its surface will not crack or craze. Rubber tile's ability to cushion footsteps and to reduce noise that results from impact with the floor makes it especially suitable for use in bedrooms and other areas where quiet and comfort are important. Through development of a special adhesive, this luxurious floor may now be specified for installation in basements, as well as on suspended and grade-level subfloors.

Plastic Tile

Plastic tile, if it is a high-quality vinyl product, is a flooring recommended for all types of interiors. A lustrous, stain-resistant flooring, it is available in a broad range of pattern effects, both bold and subdued. When installed with a waterproof adhesive, vinyl plastic tile can beautify even areas of the home below-grade level.

For rooms in which the home owner desires a feeling of quiet dignity, cork tile is an excellent choice. Its mellow, natural cork colors add splendor to dens, music rooms and bedrooms, with an underfoot comfort and noiselessness that is unsurpassed. Cork tile may be laid on any suspended subfloor, and under certain conditions on a concrete slab in contact with the ground. It is not recommended for use below ground level, or in any area where excessive dirt or foot-traffic will mar its surface.

One of the newest kinds of flooring is vinyl-cork tile. It consists of cork base onto which a layer of pure, clear vinyl plastic is fused as a wearing surface. Vinyl-cork tile, therefore, combines the warm, natural beauty of cork and the durability and easy care requirements of plastic. Regarded as a luxury flooring, it is recommended for use in any above-grade area of the house; also, it may be installed on grade-level subflooring, where adequate drainage exists.

Linoleum tile is made from linoleum sheet goods, cut in squares to facilitate handling and installation.

Linotile is a type of flooring that was developed especially for resistance to abrasion and indentation. It is not identical to linoleum cut into blocks. Linotile is a much tougher, more durable material, thanks to different manufacturing techniques and a special "aging" process. Designed for extra-long wear even in the most heavily-trafficked areas of the home, it may be installed over all types of suspended subfloors. Linotile is not, however, recommended for use in basements or on concrete in direct contact with the ground.

To give specific figures for the cost of resilient flooring materials is virtually impossible, because local costs of labor and materials vary. Generally

speaking, asphalt tile in dark colors is lowest cost of all smooth-surface flooring. Next in line is linoleum tile and lighter colorings in asphalt tile. Going up the price scale, vinyl-asbestos tile, linoleum sheet goods, plastic sheet goods, Linotile, cork tile, rubber tile and "solid" vinyl tile follow in that order, with vinyl-cork tile in the highest bracket.

At one time, asphalt tile was the only type of flooring suitable for installation in basements and other below-grade areas. Today, it should be noted, the basement recreation room can be as "dressed up" as any room in the house, with vinyl-asbestos tile, rubber tile, "solid" vinyl tile, or

Hydrocord-backed vinyl plastic sheet flooring.

Study Your Needs

Before choosing a resilient floor, the home owner should remember that there is a right flooring material for every application. He'll do well to study his own flooring needs, then consult a flooring dealer for help in choosing the floor that will give the most for his money. This consideration, before installation, will give him extra dividends in flooring appearance and in continued satisfaction through the years.

The strength of a nation, especially of a Republican nation, is in the intelligent, well-ordered homes of the people.
—Mrs. Sigornev

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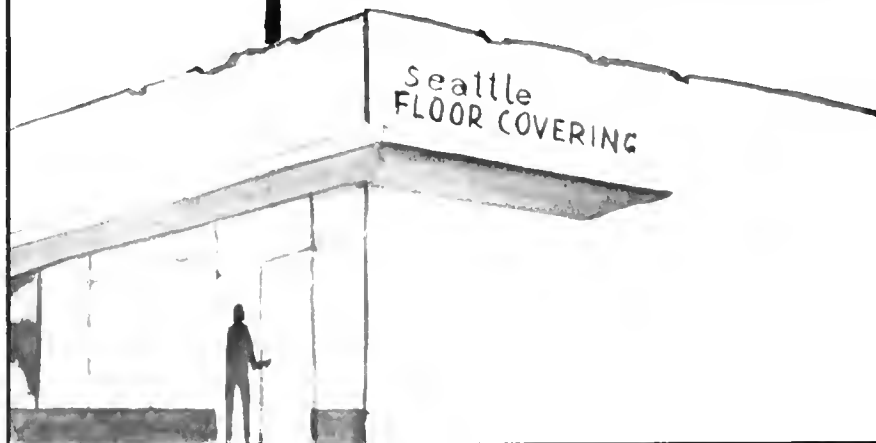
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PROPER CARE OF YOUR RESILIENT FLOORING

Waxing is easy. Pour some wax from the can onto the floor and spread it in a back-and-forth manner with a cloth or applicator and let dry. Don't be afraid of spreading too thin. A thin coat is best because it hardens quickly and resists wear. If applied too thickly, the top of the coat hardens but leaves the wax beneath soft. This deposit of wax catches dirt, which can scratch the floor. Two or three thin coats give better results than one thick layer.

A wax suggested by the makers for the type of floor you're waxing should be used for the best results. Wax containing solvents such as naphtha will harm asphalt tile and rubber tile. Really the best kind is a non-solvent, self-polishing wax which suits any of the resilient floors.

When it comes to rewaxing, new wax should be applied before the old coat is worn off. After the floor has been rewaxed a number of times, all the old coats should be scrubbed off and a fresh coat applied.

It may surprise you to learn that manufacturers of resilient flooring advise that scrubbing be held to a minimum. Two or three times a year, or only when exceptional soilings occur, is often enough. Even then, strong soaps shouldn't be used. They do more harm than a lot of wear, by discoloring the floor and slowly washing it away. Quality vinyl plastic floors which are resistant to harsh soaps are the exception to this rule.

Gasoline, turpentine, benzene, and soaps and cleaners containing oils will soften and discolor the floor too. Avoid using them on resilient floors.

To be really safe when you are not sure about the cleaners you ordinarily use, it is suggested you use a prescribed liquid cleaner developed especially for resilient flooring materials.

Use lukewarm water with the liquid cleaner. After the cleaner is applied, remove the suds from the floor with a cloth or mop rinsed in clean, cold water. When the floor is dry, you're all set to wax.

When rubber tile is buffed periodically with pads of steel wool, its life and resilience are prolonged while dirt and stains are removed. Similarly, cork tile's appearance is improved after long service by machine sanding.

No amount of care will keep the floor looking bright and cheerful if ugly indentations pit the floor. These come mostly from heavy furniture or furniture with pointed legs. Furniture rests attached to the bottom of the furniture legs will spread the weight of the furniture piece over a larger floor area and prevent distracting marks.

These few simple methods of taking care of your resilient floors will help give you a floor of lasting wear and rich colors for years to come.

APPRAISAL OF RESILIENT MATERIALS

By RICHARD BLACK

Desirable characteristics

Asphalt Tile:

Inexpensive—can be installed on or below grade concrete floors

Vinyl Asbestos Tile:

Next price range above asphalt tile. Can be installed on or below grade—many colors and styles to choose from—grease- and oil-proof—easier to maintain than asphalt tile.

Sheet Mastipave:

Recommended for work shop floors because it is durable and cuts or damages tend to heal.

Solid Vinyl Tile:

About same softness as rubber but not affected by grease, oil, solvents or alkalis. Does not stain and is easy to maintain. Is very tough and wears many years.

Cork Tile:

Very quiet and resilient—takes on room temperature and feels warm to the touch. Recommended for areas where small children play on floor.

Rubber Tile:

A soft resilient product but requires waxing and will stain if not properly cared for.

Linoleum:

A quiet durable material—scratches tend to heal themselves when waxed.

Vinyl—Sheet Goods:

Tough—non-porous—not affected by common alkalis and acids usually found in the home. Resistant to greases, oil and staining. Bright clear colors. Easy to maintain. Available in high or low gloss surfaces. Requires very little waxing.

Limitations

Indentations remain—grease, oil or solvents permanently soften, damage and stain. Noisy.

Indentations remain. Noisy.

Color range limited—black or brick red.

The high gloss surface tends to show scratches and sub-floors show any imperfections through tile.

Will stain readily if not kept waxed. Only paste wax recommended which is more difficult to apply than self-polishing types.

If subjected to excess grease, oil or solvents it will soften but being a porous material it must be kept waxed.

Subject to staining if not kept waxed—also porous enough to absorb water when in continuous contact with water.

High gloss surface tends to show scratches and any imperfections in sub-floor.

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KNOW YOUR CARPET FIBERS

By JAMES D. ATKINSON
General Sales Manager
Bigelow-Sanford, Inc. Western Division

Basically, fibers in use in carpet manufacture today are:

WOOL
COTTON
RAYON
ACRYLICS
NYLON

and then, of course, wool blended with rayon, wool blended with acrylics and wool blended with nylon—all in varying degrees, based on the manufacturers' choice.

In relative importance, wool remains on top. It is still the pivot fiber, and undoubtedly will remain so in the foreseeable future. It has many inherent characteristics that make it so suitable for use in carpets. Wool is a live fiber. Wool clipped or sheared from a live sheep will remain alive forever. It is a barbed fiber. Each strand of wool consists of a main stem, and from this protrudes thousands of tiny ends or barbs. It is one of the great phenomena of nature that these tiny barbs are constantly in motion—even after thousands of years of use microscopic examination of Oriental rugs shows this to be true. Because of the constant movement, wool, therefore, has exceptional resiliency or recovery power. This same characteristic makes wool an easy fiber to keep clean. We know some fibers absorb soil while others resist it. Wool resists it because of this constant movement. It keeps the dirt and dust stirred up and on the top of the carpet—loose—where good vacuum cleaners can pick it up.

CHARACTERISTICS OF WOOL:

- Good in all types of constructions and weaves.
- Good resistance to abrasive wear.
- Wears well.
- Excellent resistance to soil.
- Gives excellent coverage because the fiber has good bloom.
- Easily and readily cleaned.
- Excellent resistance to flame.
- Excellent adaptability to all color—even the lightest and clearest shades when it is carbonized and foreign matter such as burrs, etc., removed.
- In most constructions looks good while it is wearing out.

Now, a word or two about cotton—another product of nature. A smooth fiber with excellent tensile strength and abrasive wear power. Recovery power of the fiber is practically nil—it has little or no resilience. It has very little resistance to soil—rather cotton seems to absorb soil.

CHARACTERISTICS OF COTTON:

- Used in all types of construction.
- Excellent resistance to abrasive wear.
- No resistance to soil.
- Very little bloom so to get good coverage larger quantities or pounds per yard must be used.
- Responds well to plant cleaning—on location cleaning requires special equipment and handling.
- If densely constructed has good resistance to flame.
- Excellent adaptability to all colors and shades.

In the use of rayon fiber, both viscose and acetate are used. Some are solution dyed—some are vat dyed—some are piece dyed. The fiber does have some recovery power, but the resilience is not high.

Rayon, as a carpet fiber, represents excellent value for the price because the tensile strength and specific gravity, or bulk, is almost the same as wool. While, in identical construction, it will not give the wear that wool will give, still carpet properly made with rayon provides the consumer with good, budget-priced floor coverings.

CHARACTERISTICS OF RAYON:

- Used in all types of constructions, although mainly used today in tufted construction.
- Only fair resistance to abrasive wear.
- Little resistance to soil.
- About the same coverage as wool per pound of fiber.
- Will clean well, but special precautions must be used.
- If densely constructed, has fair resistance to flame.
- Excellent adaptability to all shades.
- Used by itself, except in exceptionally dense construction and high style, does not look good while it is wearing out.

In the family of acrylic fibers, there are many well-known names. Acrilan is probably the best known, but there are others with the same properties such as orlon and creslan. Then there are dynel and verel that are modacrylics (modified acrylics). Acrylic fibers have a slightly higher specific gravity than wool. This means they are somewhat more bulky. In other words, a pound of the fiber will cover more surface than the same pound of wool. Generally speaking, they have fair resiliency or recovery power and good abrasive wearability.

CHARACTERISTICS OF ACRYLICS:

- May be used in all types of construction.
- Resistance to abrasive wear about equal to wool.
- Good resilience or recovery power.
- Good soil resistant factor.
- Equal coverage, perhaps a little more than wool.
- Respond satisfactorily to standard cleaning methods.
- Acrylics, as such, will support flame. However, in dense weaves, they are not considered hazardous and, in the case of modacrylics, flame resistance is excellent.
- Good adaptability to color.
- With good maintenance, should present a good appearance while wearing out.

Nylon, the other important fiber used in carpet manufacture today—and perhaps the best known of all manmade fibers—is produced from coal, air and water. It is undoubtedly the toughest and produces the most resistance to abrasive wear. Again, it is a smooth fiber with not too much native ability to resist soil, nor to have

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Carpet Fibers Analyzed (Continued)

resiliency or recovery power. With the new types of long-textured filament and bulky fibers we now see, such as "501," "Cumuloft," "Caprolan," "Tycora," "Agilon," etc., however, these objectionable characteristics are being somewhat slowly overcome. By itself, the fiber's most favorable characteristic is its ability to wear. Mills can get good clear colors. It soils easily and cleans well. Until long filament, high bulk was introduced, it was not possible to make a satisfactory product in round wire because of the piling problem. Tensile strength of the fiber was so great that the loose short fibers would not pull away from the main body with ordinary vacuum cleaning and resulted in these ends rolling up in little balls, or pills, and hanging onto the face of the carpet.

Regular carpet nylon, in proper construction, and the bulk nylons, have proven satisfactory but there has been a great deal of waste nylon used and also nylon of improper denier for carpet use, particularly in low end merchandise, and this has not proven to be satisfactory.

CHARACTERISTICS OF NYLON:

- *May be used in all types of constructions.*
- *Excellent resistance to abrasive wear.*
- *Fair resiliency and recovery power but it is slow.*
- *Fair soil resistant factor.*
- *Because of its specific gravity and high bulk, gives excellent coverage.*
- *Responds well to standard cleaning methods.*
- *Excellent flame resistance.*
- *Excellent adaptability to color—any shade is possible.*
- *With good maintenance, should present a good appearance while wearing out.*

Now that we've discussed certain characteristics of the fibers themselves, a word about their being blended with other fibers might be in order. Any of them may be satisfactorily blended together. However, wool is still the pivot fiber. This means that all fibers blend together with it. Wool is used in varying degrees—when it is blended with the other fibers to help in a number of ways.

First—and perhaps most important—to give resiliency and recovery power—because it is a live fiber.

Second—To help bind the other fibers because of its barbed characteristic.

Third—To introduce into most blends the safety factor of being less susceptible to supporting flame.

Fourth—To give bulk, which in turn means better coverage in fabric face.

Various blends are used by different manufacturers, and each because the manufacturer is after a certain characteristic. Because of the wide variety

of fibers available, there actually exists an honest difference of opinion at the manufacturing level—yes, even within the technical departments of each mill—as to the value of some of the characteristics. Actually, the retailer and consumer must realize that before the carpet comes to them as a finished product the "choosing," for whatever reason, has already been done by the manufacturer. Reputable manufacturers are very cautious—they have reputations at stake—and even though once in awhile some fiber does not perform as expected, still we must accept, at face value, what the manufacturer tells us.

It is obvious, of course, that too much emphasis can be and has been devoted to fiber. The manufacturer's name, reputation, experience and know-how should not be minimized—neither should the color, texture or design be minimized in favor of the fiber. These things are all important.

A simple summing up of the major causes for fiber confusion is that:

The fiber producers are trying to sell fiber.

The carpet makers are trying to sell carpet.

The retailers are trying to sell price.

ADD IT TO YOUR MORTGAGE?

If you are building, you may wish to include the price of wall-to-wall carpeting in your mortgage. FHA insured mortgages do not permit it, but most conventional lenders will authorize such an addition.

Your builder can give you more information on it.

EMERGENCY ACTION FOR SPILLAGE

By ELEANOR F. HOWARD

1. Remain cool, calm and collected
2. Follow these instructions at once:
3. If a bulky, moist substance, scrape up excess then blot (don't rub) with tissue and repeat until there is no color transfer.
4. If a liquid, blot with tissue and repeat until there is no color transfer.
5. If this doesn't remove spot, mix a small amount — one cap full — of a household, liquid detergent in a cup of luke warm water.
6. With cotton or tissue dab this mixture lightly on the spot — don't rub just moisten spot gently.
7. Then blot with tissue — use pressure from ball of your hand — but don't rub. Continue blotting until there is no transfer of color or moisture.
8. Continue using the detergent mixture and blotting until you have removed all of the stain or until there is no change or further improvement in the stain.
9. Have patience. Some spots require much time and work to remove and some may never yield.
10. If you find you can do nothing with the spot after the above treatment then is the time to call for professional help. If it is possible to remove the spot a carefully chosen professional cleaner will be able to do it.
11. If you do use commercial or other solutions on your carpet be sure to test a small area first.
12. Remember that if you do something about the spot immediately, following the above instructions, most spots can be removed.

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WISE PLANNING

Three basic considerations are involved in wise planning:

- Carpet needs in relation to general decor.
- Carpet styles for various areas of the home, and their estimated costs.
- How to assure good service from carpets.

I. Room Decor

There is a rug or carpet to fit your desired room decor. This is determined by furniture style and size, color scheme and lighting. The ideal floor covering frames the various pieces of furniture in a room, and sets them off to their best advantage. A pleasing clean-cut effect with modern furniture can be achieved by solid color broadloom. Abstract textures and patterns will enliven the effect, while stripes may be used to lend a note of high style.

Traditional furniture calls for formality in carpeting. Wall-to-wall carpet in a sculptured design, tone on tone, or a colorful pattern borrowed from the past might be selected for the more formal setting.

Flower and leaf patterns in a carpet are attractive in their harmony with the simple lines of colonial furnishings. Replicas of hooked rugs are also appealing with this style.

Tweeds, twist or nubby textured carpets are used in many casual rooms combining modern and traditional furnishings. Precise geometric patterns also afford good backgrounds because they give a feeling of order or repose to a room with an informal arrangement of furniture.

COLOR SCHEMES

Various colors already present in a room (furniture, drapes, walls, etc.) will key your carpet color. On the other hand, if your furniture has not been purchased, it can be keyed to a broader selection of carpet color.

There are two types of color schemes to consider: a *contrasting color scheme*, or a *related color scheme*. In a contrasting color scheme, warm colors are combined with cool ones, such as a rose carpet with blues or greens in furniture. A related color scheme combines adjacent colors on a color chart, such as a beige or cinnamon carpet with copper, gold or coral tones in wallpaper or draperies. A restful effect is also achieved by combining different

values of the same color, such as dark green with light green.

An excellent color guide for a room is also provided by a patterned carpet. You may be sure that your color choices for draperies, lamp shades, pillows, etc., are correct when you match them with those in the rug. You should choose one color to dominate and the rest to accent.

A wise homemaker will also remember that cool shades, such as green or soft gray, enhances a sunny room. A room with little sunlight (a north room) looks warmer and cozier with warm color on the floor. Shades of rose, sandalwood or gold are excellent.

Here are a few more basic decorating tips:

- Light tones are always a good choice for a smaller room because they tend to make it look larger.
- If patterns are used in a small room they should be small.
- Deeper shades tend to pull a large room together, and if patterns are used they should be large.
- Combinations of several bold colors or dominant patterns in a room are confusing and should be avoided.
- Dullness results when only plain neutral colors are used.
- Bold patterns in wallpaper are best balanced by a solid color or a subtle texture in the rugs.
- If a strong, multicolor patterned rug is used, other furnishings should be of harmonizing solid colors or subdued designs.
- Before buying, view your selection in daylight, and also under the type of artificial light you have in your home.

II. Carpet Styles

Carpet styles are divided into three classifications: wall-to-wall, room-fit rugs and room-size rugs.

Wall-to-wall carpets are a good choice for a feeling of spaciousness and elegance when used in smaller contemporary homes where rooms and hallways flow together. In any home this mode of carpetry makes small rooms appear larger, and tends to unify the furnishings in a large room, and thus pulls it together.

Room-fit rugs are especially desirable for rooms with irregular shapes. They afford much the same feeling of luxury as wall-to-wall carpets. They are cut to the contour of the room, with a narrow border of bare floor showing.

Room-size rugs should come within 12 inches of the wall in a large room, and 8 inches in a small room. These rugs come in standard sizes such as 9 x 12 feet and 12 x 15 feet. Special sizes may be ordered.

Halls and stairways often afford the opportunity to make use of overage from wall-to-wall installations in another room. You may also select from standard widths of 27" or 36". Because these areas bear the heaviest traffic, it pays to consider high quality, durable carpeting. Safety and quietness are important factors in carpeting these high-traffic areas.

ESTIMATE CARPET COST

Before buying carpet it would be wise to have an idea of the floor space to be covered in order to arrive at an estimated cost. Here's a guide to help you arrive at this estimate:

1. Measure the length and the width of the room. If areas are irregular, divide the room into rectangles.

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In laying cushion with a raised design on one side, the raised side should rest on the floor with the smooth side up.

2. Multiply length by width to arrive at total square feet.

3. Divide this figure by 9 to determine square yards. Carpets are usually sold by the square yard.

III. Carpet Serviceability

The inherent quality of carpet, the kind of use it will get, and its care largely determine its serviceability.

Consider the amount of traffic in specific areas of your home. A larger family means more traffic and more wear. It is the scuffing of shoes and pounding of heels that causes the most wear. For this reason a wise buyer will select the best quality which can be afforded for heavy traffic areas such as entrance halls, stairways, living rooms, family rooms, etc. Look for durability and good resilience. If your carpet budget is limited, economize with less expensive grades for light traffic areas such as bedrooms and guest rooms.

GOOD QUALITY

It is difficult for even the experts to evaluate the merits of two similar pieces of carpet with complete accuracy. For this reason it is important that you get advice from a reliable dealer who stands behind his merchandise. In recommending a floor covering to you a good dealer will take into consideration the balance of four factors which affect quality:

1. The types and grades of fibers used. (See other articles in this section.)

2. Construction of the yarn. This factor is not as important as in the past. Today almost all grades of carpets are produced in each construction method—Axminster, Velvet, Wilton and Tufted.

3. Depth and density of the pile. Pile is the total amount of yarn woven or tufted into the surface of the carpet. It is the tufts of yarn that stand erect from the base of the carpet and form the surface.

4. Resilience of the pile. Resilience is the ability of the pile to spring back after being subjected to pressure.

Proper Care for Rugs & Carpets

By Eleanor F. Howard

One of your largest household investments is your rugs and carpets. There are two ways to protect this investment — first, through home care; second, through professional cleaning.

Home Care

Use a carpet sweeper daily for quick pick-ups. And use it immediately after ashes or crumbs fall on your rugs.

A carpet should be vacuumed as often as you see or feel any amount of soil on it — no less than twice weekly. There is definitely no harm to be done by vacuuming frequently. The harm comes if you don't vacuum. Dust and grit left on the carpet will act the same as little particles of glass, slowly cutting away the fibers. Entrance ways and traffic areas may require daily vacuuming.

And when something is spilled or dropped on the floor causing a spot immediate, but calm, action will almost guarantee removal. A spotting kit is recommended for every household. Follow instructions carefully. For such emergencies consult the chart on Spot Removal on page 93. If you need help or advice on difficult stains, call your responsible cleaner immediately. Once a spot has dried or allowed to set in the fabric, even professional spot removers cannot guarantee results.

Professional Cleaning

Like all other fabrics in your home, rugs and carpets need to be washed at least once a year. This may seem too often but remember that if you allow your rugs and carpets to become soil-saturated even the professional cannot restore them. And, remember, too, that only such an expert can remove the clingy, oily soil that constitutes about

40 per cent of the dirt in the average city or suburban home.

Choose your professional cleaner with care. Make sure he will guarantee to do the following things when he cleans your rugs in his plant:

1. Remove all loose soil with mechanical vacuums and dusters
2. Wash both the front and back of the rug
3. Rinse atmospheric soil and cleaning material out by applying water under pressure — at least two gallons per square foot
4. Dry slowly under controlled heat to minimize the shrinkage factor as much as possible

Make sure your professional cleaner will guarantee to do the following if he cleans your wall-to-wall carpeting in your home:

1. Use tested and approved cleaning material that will effectively loosen soil; be non-alkaline; be fast drying to avoid mildew, dry rot, and excessive shrinkage; be free of fatty acids which leave a sludge to attract soil and develop odors; be free of solid particles which attract new soil and act as fiber abrasives
2. Use commercial sealed power vacuum
3. Use a blended nylon bristle brush
4. Clean edges by hand to insure clean edges and corners and scuff-free baseboards
5. Work on spots carefully as a separate operation
6. Brush pile upright immediately after cleaning
7. Place furniture back in position on waterproof pads to avoid furniture stains or rust marks



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Your Second Home For Leisure Living

By ALAN HOELTING

Did you notice this "headline" in the June 12, 1960 issue of the Seattle Times?

**"BOOMING TREND IN PACIFIC
NORTHWEST LIVING IS TWO
HOMES FOR EVERY FAMILY"**

While this publication is devoted mainly to primary housing, it would not be complete without reference to the "snowballing" trend toward second homes for leisure. Being blessed as we are with mountains, forests, streams and shores, it is a certainty that a high proportion of readers will join either the **SECOND HOME** or the **BOATING** category, if not both.

The number of men who have turned their backs on material advancement because it would take them to a less inspiring locale is legion; likewise, the number who have migrated from other areas so that their families might enjoy the Puget Sound "way of life" is equally impressive.

First it was "two chickens in every pot," then "two cars in every garage," and now "two homes for every family." This is not a fact for only the wealthy; there are second homes to fit every pocketbook. Neither is it a fact for only Puget Sound where the possibilities to fit every taste and desire can be realized. In less blessed areas the second home movement is growing in a way that startles economists. An executive of one automobile firm complains that the second home is the second car's biggest competition.

There are many reasons behind the trend, other than the availability of what economists call more "discretionary buying power." They include:

(a) Increased leisure time and changing leisure habits.

(b) Buildup of economic and social pressures that are fostering a motivation to "get out of this whirl."

(c) Easy accessibility of sites through the new highway systems.

(d) Desire for what is becoming a "prestige" possession.

(e) Family "togetherness."

(f) The **INVESTMENT** aspects, with rising real estate values generated by the population explosion, "the one thing they aren't making any more of is land."

(g) The growing number of comparatively affluent older couples who plan to use their leisure homes for year-round living after retirement.

Assuming you are in the market for



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a second home, let us get down to detail:

Some of you will still be endowed with the pioneer spirit. Your approach will completely preserve your independence of choice and of action, which has merit, but you must be prepared for a more costly program and the likelihood of more "headaches." You first must purchase your site at full retail cost, each phase of the development — clearing, roads, water, electricity, construction, recreational development, etc.—must then be individually arranged for *and financed*. You will have no guarantee that adjoining developments will be to your liking. There will be inefficiencies and duplications in your efforts and the efforts of those you will employ. Generally speaking, the price you will have to pay for "individuality" is a factor well worth careful consideration.

By contrast, most of you will recognize that "packaging" has the same advantages in the second home market as in every other economic complex from insurance policies to foodstuffs. The second home "package" is being offered in greater volume and greater variety with each passing month. Let us take one hypothetical offering:

(1) The diverse interests of a realtor, a land owner, a lending institu-

tion, a construction firm and a materials supplier join forces.

(2) Together they plat a ten-acre section into twenty half-acre sites; the 300 feet of choice waterfront it contains is established as community beach, thereby reducing the cost per unit.

(3) They efficiently, and without duplication, clear the land, build roads, put in a water system, provide electricity to each site and erect a dock and tennis courts.

(4) With mass purchasing power and efficient use of expensive labor they erect twenty basic cabin shells in ten different styles and sizes, completing the plumbing and wiring, but leaving the partitioning, painting and other final touches to the purchaser so as to retain a vestige of "individuality."

(5) They offer this package to you at 20% down and the balance in equal monthly payments over five to ten years. You know your costs, and you know you are financed over all aspects of the acquisition. You know it is properly engineered and there is no cloud on resale. Best of all, you can move right in.

Whichever method you choose—pioneering or the "package"—your second home is well within reach of the average family.

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